

THE ANGLO-EGYPTIAN SUDAN FROM WITHIN

EDITED BY
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M.C.
(*Sudan Political Service*).

WITH A FOREWORD BY
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FOREWORD

THE Anglo-Egyptian Sudan has been the subject of books by travellers, soldiers, sportsmen and historians, but little has come from the pens of its British Administrators. A notable exception is the valuable compendium, entitled *The Anglo-Egyptian Sudan*, by Sir H. MacMichael. He it was who encouraged Mr. Hamilton in the idea of collecting together for the benefit of serving officers a series of articles descriptive of the country, its peoples, circumstances and problems. The authors of these articles are representative individuals who have set out their knowledge and opinions without an official *imprimatur*. Each of them is well qualified by intimate study and personal experience to write about the subject he has chosen. This is the distinctive characteristic of the present work. It is the product of men who have lived in the Sudan and taken an active part in one or other branch of its public services. Their purposes are clearly defined. Their outlook is realist. Their pictures are life studies.

I confidently recommend "THE ANGLO-EGYPTIAN SUDAN FROM WITHIN" to all who are interested in the Sudan and its peoples, or are concerned—however remotely—with their welfare.

G. S. SYMES,

Governor-General of the Sudan.

Khartoum,

27th March, 1935.

Your commission entrusts you with the superintendence and charge of a province whose rise and fall must considerably affect the public welfare of the whole. The exposing and eradicating of numberless oppressions which are as grievous to the poor as they are injurious to the Government ; the displaying of those national principles of honour, faith, rectitude, and humility, which should ever characterise the name of an Englishman ; the impressing the lowest individual with these ideas and raising the heart of the Ryot from oppression and despondency to security and joy are the valuable results which must result to our nation from a prudent and wise behaviour on your part. Versed as you are in the language, depend on none when you yourself can possibly hear and determine. Let access to you be easy, and be careful of the conduct of your dependants. Aim at no undue influence yourself, and check it in all others. Great share of integrity, disinterestedness, assiduity, and watchfulness is necessary not only for your own guidance, but as an example to all others.

1769.

INSTRUCTIONS FROM COUNCIL OF CALCUTTA

EDITOR'S NOTE.

THE following memoranda have been collected and published in the hope that they may give officials of the Sudan Government, and possibly a wider public, a background of general knowledge of the Anglo-Egyptian Sudan. It is not claimed that the series is complete and there are obvious omissions. For example, there are none dealing specifically with agricultural and veterinary problems. The reason for this is that it was felt that these were best studied in the excellent brochures of departments concerned.

An attempt has been made to group the memoranda into sections, but each is complete in itself and can be read without reference to the others. In some cases a list of books and articles bearing more fully on the subjects referred to has been appended, so that those interested can pursue them further, if so inclined. References to articles in *Sudan Notes and Records* have in many cases been made, and it may perhaps not be out of place to call the attention of readers to the wealth of information to be found in the volumes of that journal.

The first section deals with the historical background, and includes an article by Mr. Addison on archæological discoveries in the Sudan. The recent history of Egypt and the Sudan has been purposely excluded, as this should be thoroughly studied in such books as Lord Cromer's *Modern Egypt*, Sir Harold MacMichael's *Anglo-Egyptian Sudan*, and the relevant volumes of the Institute of International Affairs.

• Section two is designed to give in broad outline a description of the chief groups of peoples in the Sudan and the problems of administration presented by them.

Section three contains articles dealing with questions of faiths and customs. Mr. W. R. G. Bond's Note on *Karama* has been specially included as it illustrates perfectly the sympathetic and objective approach to native customs so necessary to their understanding.

The last two sections require no comment, except to express the hope that a better understanding of the problems of each department may help towards the harmony of the whole administration.

Thanks are due to the various contributors for their co-operation and to the clerical staff of the Sudan Agency for their help in preparing the book for the press.

J. A. DE C. HAMILTON.

(Note : In spelling Arabic words and names, no attempt has been made to indicate sounds peculiar to Arabic by diacritical marks.)

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"From chaos, and primeval darkness, came Light."

KEATS.

PART I.

THE HISTORICAL BACKGROUND

By SIR HAROLD MACMICHAEL, K.C.M.G., D.S.O.

NO accurate historical account can ever be written, even in general terms, of what occurred throughout the million square miles now known as "The Sudan" before the Egyptians invaded it in 1821. It is true that the northern riverain area, Nubia that is, provides materials for more or less continuous narrative in its monuments and tombs, but, even there, whole centuries are devoid of record. In the broad sandy provinces which stretch across the centre of the Sudan from Abyssinia to French Equatorial Africa there are only fragmentary clues from the sixteenth and following centuries, when local Sultans ruled in Darfur and Kordofan and on the Blue Nile. Of what happened in the marshes and forests of the South until recent days nothing can ever be known but what can be deduced from the researches of the anthropologist.

Until the Egyptian conquest no single name could have been applied to the whole country, and, with the exceptions above mentioned, nothing remains but garbled memories of tribal quarrels. The medley of races and tribes inhabiting this vast area—primeval blacks in the South, nomad Arabs and domesticated villagers of mixed descent in the North, immigrants from East and West, were all subjugated by the "Turks," but they had nothing

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in common but discontent until, after sixty years, the fanatical zeal of the Mahdi effected a temporary coalition, which after his death was kept in being forcibly by his successor, the Khalifa, until the "crowning mercy" of Omdurman.

Some 5,000 years ago it would seem from such remains as have been found in ancient burial grounds that Nubia was inhabited by a people practically identical with that of Egypt, a small dark-haired folk not unlike the Temehu or Libyans of the Western desert. Perhaps 1,000 years later there moved northwards to Nubia from the South, under some unknown impetus, a stream of negroes of the small brachycephalic type now found in the southern Bahr el Ghazal. At approximately the same period Libyans from the Western desert were settling in Nubia, and by about 2,000 B.C. the fusion of these races had produced a population not unlike that of the present day.

But within a century or two, to judge from pictorial representations in Nubia, there was an influx of negroes of a different kind, larger stronger men, apparently of the type now found in the Nuba Mountains, and these, sweeping all before them destroyed even the forts which the Pharaohs of Egypt had established in Dongola province. In 1879 B.C. Sesostris III advanced against the blacks, beat them back and in token of victory erected a *stèle* of granite at Semna, some forty miles to the south of Halfa. The Egyptian forts were rebuilt and the most important of them, Kerma, remained as an administrative centre until it was destroyed by fire about 1600 B.C.

In the 'Empire' period, from about the middle of the 2nd millenium B.C., that is, for some 550 years, the colonisation of Nubia made steady progress, the trade in slaves and ivory, ostrich feathers, panther skins, ebony and spices, was developed, and the mines of the Eastern

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desert were worked for gold and emeralds. The country was divided by the Pharaohs for administrative purposes into two viceroyalties, that of Wawat in the north, and that of Kush—a vague and indeterminate sphere to the south. Forays and trading expeditions appear to have penetrated south-westwards into Kordofan and south-eastwards into the Fung province, but we have no knowledge of what may have been the state of affairs in this epoch anywhere else in the Sudan but in northern Nubia.

About the middle of the 10th century B.C. a change comes over the scene. A Libyan dynasty had seized the power in Egypt, and other Libyans of cognate stock soon became predominant in Nubia. They founded a monarchy with its capital at Napata, near Gebel Barkal, and early in the eighth century, Kashta, a Libyo-Sudanese, conquered Upper Egypt as far as Thebes. Piankhi, his successor, pushed further afield, overran Lower Egypt and took tribute from it. He appears also to have installed a branch of the royal family at Meroë, near the junction of the Atbara with the Nile. The next King to rule in Nubia, Shabaka (712–700 B.C.) not only ruled for a time as far as the shores of the Mediterranean, but sent his savage troops under Taharka, the son of Piankhi, to assist King Hezekiah, in Palestine, against the Assyrians of Sennacherib.

When, later, Taharka himself came to the throne he continued the conflict with the Assyrians, but he was eventually driven back from Lower to Upper Egypt and thence to Napata. Tanutamun followed him upon the throne, and in 663 B.C. reoccupied the Delta of Egypt. Two years later he was expelled by Assurbanipal and by 654 B.C. he had lost Thebes and retired to his homelands beyond the cataracts. For the next three and a half centuries the Nubians were content, it seems, to

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*consolidate their power from the “*sudd*” regions of the White Nile to Aswan. During this period the sovereignty remained vested in the King who ruled at Napata, but, for some reason the chief power then passed to Meroë. The change may have been due to the succession to power of a different branch of the royal house, but an obvious explanation may lie in the greater convenience of Meroë as a trade centre, commanding the routes from Abyssinia, the Red Sea and the south, more in touch with the subject population of the interior, more fertile, with better grazing facilities for herds, and more easily defensible from the north. Napata, however, was not forsaken, for there are times during the 650 years (say 300 B.C.—A.D. 350) which constitute the Meroitic period in which contemporaneous royal tombs are found both at Napata and Meroë, and it would appear that Ethiopia, as it may now conveniently be called, was periodically divided against itself. The earliest extant remains at Meroë, and the evidence of Herodotus (c. 450 B.C.), and the early Greek and Roman geographers point to the fact that though the bulk of the population was predominantly negro, of a very primitive culture, half nomadic half sedentary, living by the chase and cultivation of the soil, Egyptian, and subsequently Greek and Roman influences were predominant among the ruling class. There is also reason to suppose that they were affected by Sabaeen and Abyssinian *motifs* in art and religion.

An influx of Greek influences naturally followed the accession of the Ptolemies to power in Egypt (323 B.C.) and the boom in African trade which resulted. The Romans appear upon the scene shortly before the opening of the Christian era. Their historians speak of a line of queens named Candace, but in fact the term Candace, which means ‘Queen,’ appears upon several occasions to

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have been applied to a queen-regent of the blood royal who survived her husband and held titular power during the minority of her son. As soon as the legions occupied Aswan they were attacked by the Ethiopians. The Prefect Petronius in 23 B.C. countered by marching south and destroying Napata. The local population was enslaved and a thousand specimens were sent as a gift to Cæsar. From this disaster the rulers of Napata never recovered and henceforth the power of Ethiopia centred upon Meroë only.

About 80 years later two Centurions and a body of Praetorian troops were sent by Nero to explore the Nile. They passed the cataracts successfully, reached the junction of the Blue and White Niles, and only turned back when they reached the impenetrable barrier of the *sudd*.

By now, towards the end of the first century A.D., that is, Ethiopia was no longer a powerful state. Numerous petty *meks* ruled their respective tribes and districts and such allegiance as they owed to Meroë was more or less nominal. The brief period of revival which followed was marked by the building of some small temples, but conditions appear to have become more and more chaotic, with Beja tribes to the east, and Nuba to the west, raiding the Roman provinces and no central authority in control.

About A.D. 350 disaster came upon Meroë from the south-east, for the King of Axum invaded Ethiopia by way of the Atbara river and laid it waste. Abyssinia had at this period recently been converted to Christianity by monks who had travelled thither by sea. Nubia, northern Ethiopia that is, was not converted until 200 years later, when, as Barhebraeus records, a certain priest named Julianus "inflamed by pious zeal towards the Nubians living on the borders of the southern Thebaid, began to meditate whether by any means he might lead

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'them to the Christian faith, for they were heathen and grievously vexed the Roman territory.' He travelled up the Nile and by some means achieved his object so thoroughly that Christianity was accepted by Nubia and remained the official religion of Nubia until it was finally swept away by the Arabs some 700 years later. Churches were built in Upper Egypt, on the Halfa reach, and in Dongola during the sixth and following centuries, and the remains of others can still be seen above Khartoum on the banks of the Blue Nile.

The reader will find further details of this period in Mr. Addison's article on the "Archæology of the Sudan."

AN ARCHÆOLOGICAL SURVEY OF THE SUDAN

By F. ADDISON

Late Conservator of Antiquities, Sudan Government.

THE principal ancient sites in the Sudan have now been excavated and the outline of the ancient history of the country is well established. A number of smaller sites still await excavation, but it is probable that any information these may yield in the future will serve rather to fill in this outline than materially to modify it.

The history of the Sudan has always been more or less bound up with that of Egypt.¹ The earliest records show the Egyptians sending trading caravans and occasional military expeditions to the Sudan, and to protect the trade routes the Egyptians of the Middle Kingdom effected a military occupation of the country as far south as Kerma. A second and more extended occupation took place in New Empire times, and this resulted in a complete Egyptianisation of the area now included in Halfa and Dongola Provinces. During the eighth century B.C. the so-called Ethiopian dynasty arose at Napata, and this dynasty ruled the country first from Napata and then from Meroë for more than a thousand years. (The site of the ancient Napata is roughly that of Merowë in Dongola Province, and the ruins of Meroë are near Kabushia in Berber Province. The modern *Merowë* is not to be

¹ This and subsequent references are to the bibliography at the end of the note.

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confused with the ancient *Meroë*.) The Sudan was Christianised during the sixth century A.D. and two Christian kingdoms were formed. The southern kingdom was called Aloa and its capital was Soba. The northern kingdom was Mukarra with its capital at Old Dongola. Christianity finally gave way to Islam in the thirteenth century A.D.

It will be convenient to consider the antiquities of the Sudan in groups according to the period to which they belong, and this chronological order corresponds roughly to their geographical distribution from north to south.

Middle Kingdom Period. 2000-1600 B.C.

The principal visible remains of the first Egyptian occupation are eight fortresses between Wadi Halfa and Semna, and the ruins and tumuli at Kerma.

The forts are of mud brick and were all built round about 2000 B.C. They are found at Buhen (opposite Wadi Halfa), Dabenarti, Mirgissa, Shalfak (opposite Sarras), Uronarti or Geziret-el-Melik, and three at Semna. Of these last the largest is on the west bank of the river, and another is opposite to it at Semna East or Kumma. The third is on lower ground to the south of the western fort and is much smaller and less well preserved than the other two. There are also ancient forts at Mayanarti and Dorgaynarti, but these are later than those mentioned and their dating must await excavation. Some of these forts, notably those at Buhen, Uronarti, and Semna, were re-occupied during the New Empire period.²

Kerma was the residence of the governor or viceroy during the Middle Kingdom occupation, and here the Egyptians developed a special local civilisation, deeply affected by local customs and materials. The massive

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mud brick "deffufa" near the river is the ruin of what was in those days a fortified trading and administrative centre, while the upper "deffufa" was a chapel attached to the cemetery. The enormous burial tumuli of the Egyptian governors in this cemetery were excavated by Dr. Reisner in 1913-1915 with remarkable results.³

There are various inscriptions on the rocks at Semna, amongst them the well-known Nile records, which belong to this period.

New Empire Period. 1550-1100 B.C.

The principal monuments of the New Empire period are temples at Buhen, Uronarti, Semna, Saddenga, Sulb, Delgo, and Kawa, all except the last in Halfa Province. Temples were also built at Faras, Sai, and Barkal, though only traces now remain.

Buhen, established during the Middle Kingdom, became a considerable town in New Empire times, and the two temples now to be seen here were built in this period. The smaller was founded at the very beginning of the period by Aahmes I (1580-1557 B.C.), but it is now very much ruined. The larger and better preserved was started by Queen Hatshepsut about 1500 B.C. and finished by Thothmes III.

At Uronarti only the foundation courses remain of the little temple in the fort, but the small temples at Semna West and Semna East are still fairly well preserved. The larger, in the western fort, was built by Thothmes III (1501-1447 B.C.), though there is evidence of earlier building by Thothmes I and Thothmes II. The smaller temple in the eastern fort was also built by Thothmes III, but it was partially rebuilt by his successor, Amenophis II.⁴

The little temple of Saddenga is not far from Gubba Selim, and it was built by Amenophis III (1411-1375 B.C.)

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in honour of his wife, Tiy. Only one graceful fluted column, surmounted by a Hathor capital, now remains standing. Near by are the remains of a Christian monastery.

At Sesi, opposite Delgo, are three columns which are all that remain of a temple built, or possibly usurped, by Seti I (1313-1292 B.C.). These stand on the site of a town contemporary with the temple, the surrounding wall of which may still be traced.

At Kawa, on the right bank of the river about three miles south of Dongola, are the remains of a large town founded in the New Empire period. The principal temple here is of Ethiopian date, but there remain a masonry shrine and four fluted columns of a temple built—or more correctly restored—by Tutankhamen. These were later incorporated in a temple built in the Ethiopian period.

At Faras the late Professor Griffith in 1911 found the remains of a temple built by Tutankhamen, and on Sai Island there exists masonry from temples built by various kings between 1500 and 1400 B.C. The "castle" of Sai was originally a fort built during this period, but it was re-built and occupied by one of Sultan Selim's Bosnian garrisons during the 16th century A.D., and again by a Turkish garrison at the beginning of the 19th century.

No ruins of actual New Empire temples now exist at Barkal, but Dr. Reisner in 1916 found stelæ of Thothmes III and Seti I, and other evidence of former building by various kings of the period.⁵ The association of Gebel Barkal with the god Amon, so important in later centuries, began at this time.

Other traces of the New Empire occupation are rock inscriptions. There is a long inscription of Seti I, cut half-way up a rocky hill at Nauri, between Kerma and Delgo, and there are inscriptions of Thothmes I (ca. 1540-1501 B.C.)

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at Tumbus, near the Halfa-Dongola boundary. One of these is a long inscription cut on the face of a large boulder, which stands beside the modern road, and it records military operations and the building of a fort. On the side of this same boulder is a votive inscription of the viceroy Meri-u-mes of the time of Amenophis III. Near by, on boulders by the river, are inscribed the names and titles of Thothmes I. On the opposite side of the road is a quarry from which grey granite was obtained both in New Empire and Ethiopian times. The unfinished statue now to be seen here is Ethiopian, and was probably intended to be a companion statue to the large figure of Atlanersa (653-643 B.C.) which is now in the Merowë museum. On the island of Tumbus there is an unimportant inscription and also the remains of a fort. This may originally have been the fort referred to in the inscription of Thothmes I, but it has been rebuilt and re-occupied in comparatively modern times.

The last Egyptian viceroy of whom we have record was in office from about 1100 B.C. to 1090 B.C. By this time the second Egyptian occupation had lasted nearly five centuries and Ethiopia had become completely Egyptianised. And though the surviving records for the next three hundred years contain practically no mention of Ethiopia, the country doubtless continued to form part of the Egyptian dominions through the period of unstable government and internal confusion which followed the decline of the New Empire.

Ethiopian Period. 750-300 B.C.

When Ethiopia next appears in the Egyptian records the so-called Ethiopian dynasty had established itself at Napata.

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The term *Ethiopia* calls, perhaps, for some definition. It was the name given in classical times to the vague region south of Egypt; and though the name has now been appropriated by the Abyssinians, the Ethiopia of ancient times may be regarded as the Nile valley from Shellal to Khartoum, with the area to the east. The Egyptian *Kush* was a smaller area, probably not more than that now covered by Halfa and Dongola Provinces.

According to Dr. Reisner's reconstruction of the history of the period, the Ethiopian dynasty was of Libyan origin.⁶ While the northern Libyans were entering the Delta (ultimately to seize power as the XXIInd dynasty), the southern Libyans, the *Temehu*, pushed into the Nile valley in Ethiopia, coming from the west by much the same route as that used by the Guraan raiders to-day. About 900 B.C. a chief of this Libyan tribe established himself on an estate at Kurru, a few miles downstream of Barkal, and within a few generations his descendants had become the *de facto* rulers of Ethiopia. One of them, Kashta, who had already assumed the title of King of Kush, advanced into Egypt about 750 B.C. and gained control of that country as far north as Thebes. His successor, Piankhi (744-710 B.C.), conquered the whole of Egypt, and the following kings, Shabaka, Shabataka, and Tirhaka, appear in Egyptian history as the XXVth dynasty.

The rule of the Ethiopians in Egypt was cut short by the Assyrian conquest in 661 B.C. The defeated king, Tanutamun, retired to Napata, whither the Assyrians could not, or at any rate did not follow, and thereafter the dynasty ruled over Ethiopia alone.

Most of the monuments of the Ethiopian period are grouped in the vicinity of Merowë. There are pyramids at Kurru and Nuri; pyramids and a complex of temple

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ruins at Barkal ; and a temple and traces of other buildings at Merowë itself. In addition there is a large temple at Kawa, and two colossal statues on Argo Island.

The pyramids of Kurru mark the earlier Ethiopian cemetery. The graves on the highest ground are those of the first ancestors of the family which was later to rule the country, but the first true pyramids to be built here were those of Piankhi, Shabaka, and Shabataka.⁶ Though the pyramid superstructures have disappeared, the tomb chambers of these kings are still to be seen here. In all the royal cemeteries, i.e., at Nuri, Barkal, and Meroë as well as here, the actual burial chambers were excavated in the rock some distance below ground level and the pyramids built on the ground above the chambers. A small chapel was built against the eastern face of the pyramid.

Tirhaka (688-663 B.C.) is the best known of the Ethiopian kings, possibly because he was the first to live any length of time in Egypt and the first to grasp the possibilities of ostentation offered by his control of that country. He could find no room in the ancestral cemetery at Kurru for the large pyramid he projected, so he started a new cemetery at Nuri and built there the largest pyramid in the country. His successor Tanutamun, broken by the Assyrians, made a modest tomb in the old cemetery at Kurru, and this is one of the two painted tombs now to be seen there, the other being that of his mother, Qalhata. After him all the members of the royal family who ruled at Napata, with one exception, were buried at Nuri. This exception was a comparatively late king (Piankhalara 362-342 B.C.) who for some reason reverted to Kurru and built the largest pyramid now remaining in that cemetery. The last king to be buried at Nuri was Nastasen (328-308 B.C.).

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At Gebel Barkal there has been so much building, destruction, and reconstruction in different ages that detailed reference to the existing ruins is impossible without plans. The great temple of Amon was founded in New Empire times, but it was practically rebuilt by Piankhi and added to by Tirhaka. To-day only the back part of the temple which survives belongs to the Ethiopian period. The pylons and pillars of the forecourt belong to a Meroitic reconstruction between 200 and 100 B.C., and the plaster on these to a still later reconstruction after 20 B.C. The rock-cut temple at the foot of the north-eastern face of the mountain was built by Tirhaka, and the ruins which lie between this and the Great Temple are chiefly those of the temples of later Ethiopian kings.

The pyramids at Barkal belong to the two periods, 300-225 B.C. and 100-20 B.C., when there appear to have been rival capitals at Napata and Meroë (see below). They are later than the Nuri pyramids and contemporary with some of the earlier ones at Begrawiya (Meroë). They lie in three groups, and the oldest pyramid is the largest of the middle group. Chronologically it follows immediately after the last royal pyramid at Nuri and dates from about 280 B.C. The latest pyramid at Barkal is also in this middle group. It is the small ruined pyramid at the extreme north-west of the group, and Dr. Reisner believes it to be that of the one-eyed Queen Candace mentioned by Strabo and dates it to about 22 B.C. (It may here be mentioned that "Candace" is not a proper name but a corruption of a Meroitic title meaning "queen.")

At Merowë, on the outskirts of the modern town, are the ruins of a temple built by Tirhaka, and the foundations of a building which Prof. Griffith suggested may have been the royal treasury. Here also are the cemeteries of the ancient town which were excavated in 1913. Ethiopian

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beads and amulets are still to be picked up on the desert behind the town, though not in such quantities as formerly.

Kawa is the last important site in the Sudan to be excavated. The large temple here was built by Tirhaka and is probably the most striking ancient monument now to be seen in the country. This temple and the surrounding buildings were excavated in 1930-1931 by Prof. Griffith, who then discovered the earlier temple restored by Tutankhamen to which reference has already been made. Tirhaka incorporated this building of Tutankhamen in a subsidiary temple with crude brick walls and stone gateways. There are also remains of other, both earlier and later, Ethiopian buildings, and a stone shrine, originally gilded, belonging to the Meroitic period. Prof. Griffith estimated that the town in which these temples stood must have had at least twenty-thousand inhabitants, and the surrounding area, though now deeply buried in sand, must have been widely cultivated in ancient times.⁷

Argo Island appears to have been occupied in Middle Kingdom times, for two statues and an altar of this period (now in the Merowë museum) were found here. The two colossal statues now lying on the island are, however, Ethiopian. They are made of Tumbus granite and were probably intended to be figures of Atlanersa, the same king whose unfinished statue lies in the quarry at Tumbus. They are uninscribed and it is possible that they were never erected.

This Ethiopian period does not reveal the emergence of any distinctively native culture or art, for the country had been Egyptianised for centuries before the rise of the Ethiopian dynasty. Moreover, during the period of their greatest architectural activity, the Ethiopian kings were also Pharaohs of Egypt, and had at their command the best artists and craftsmen Egypt could at that time

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produce. The temples of this period in the Sudan, as in earlier times, thus represent an overflow into Ethiopia of the Egyptian art and architecture of their day. But after the retirement of the Ethiopians to their own country in 661 B.C. this contact with Egypt was broken, and there followed a gradual decay of the acquired Egyptian culture and a corresponding degeneration in the standard attained in arts and crafts. This decline is especially noticeable in the sequence of objects recovered from the pyramid tombs at Nuri.

It will have been observed that the Ethiopians built chiefly on sites already established by the Egyptians, but in the south they developed the city which ultimately became the capital of the country and was known in classical times as Meroë. The original foundation of this city is obscure, but the archæological evidence shows that a branch of the ruling family settled there quite early in the history of the dynasty and laid the foundation of its future importance.

Up to about 300 B.C. the king was always selected from the northern or Napatan branch of the family, but after the death of Nastasen both branches claimed the throne, so that from about 308 B.C. to 225 B.C. there were rival kings in the land, one at Meroë and one at Napata. Ultimately the Meroitic branch gained the supremacy, though it was again challenged during the period 100 B.C. to 20 B.C. when there were once more rulers at both capitals. The sovereigns proclaimed at Napata during these two periods of internal strife were buried under the pyramids at Barkal, as previously noted.

The establishment of the first king at Meroë marks the end of the Ethiopian period, which is, quite simply, the period when Napata was the unchallenged capital of the country.

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Meroitic Period. 300 B.C.—A.D. 350.

The Meroitic period in the Sudan is that during which Meroë was the capital, and it was contemporary with the Ptolemaic age in Egypt and part of the subsequent Roman occupation of that country. Objects of Greek and Roman manufacture have been found in the Meroitic tombs, and some classical influence is apparent in the later Meroitic art. The knowledge and use of the Egyptian language died out during the Ethiopian period, and early in the Meroitic period a new script, now known as the Meroitic, makes its appearance. The hieroglyphic form of this language was based on the Egyptian, but the cursive script is something previously unknown.

The Meroitic remains are more widely distributed than those of any other period. At its zenith the Meroitic kingdom extended to the south beyond Sennar, and to the north it reached Shellal. The temple of Dakka, between Wadi Halfa and Shellal, was built by the Meroitic king, Ergamanes (225–200 B.C.), and his successor Azagman built the temple of Dabod, still nearer Shellal.

The principal Meroitic site is, of course, that of Meroë itself, the city and pyramids at Begrawiya, three miles north of Kabushia. The site of the city was partly excavated in 1909–1914 by Prof. Garstang, and he uncovered the principal buildings, the largest of which was a great temple of Amon. He also cleared the so-called Temple of the Sun, in the plain to the east of the city, which was founded in the Ethiopian period soon after 600 B.C. But most of the buildings he revealed, decorated in crude imitation of classical models, belong to a comparatively late and decadent period, probably the second or third century A.D.

The pyramids were excavated in 1920–1923 by Dr. Reisner.^s They lie in three groups, one near the

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city (the western cemetery), and the others on the first ridges of the higher desert about $2\frac{1}{2}$ miles from the city. The two latter are divided by the Wadi el Tarabil into the northern and southern cemeteries. The southern is the older and was originally the cemetery of the branch of the royal family settled at Meroë. It was still in use when this branch became the ruling one, and the pyramids low down on the slope of the hill mark the first tombs of kings and queens on the site. They are similar to, and contemporary with, the earlier pyramids at Barkal. These pyramids exhausted the available space in this first burial ground, so the northern cemetery was started about 250 B.C. and remained in use until the downfall of the kingdom about 350 A.D. The walls of many of the pyramid chapels in this group are still intact, and a characteristic feature of the reliefs upon them is the steatopygous type of the royal ladies portrayed. The wall now in Khartoum is from one of these pyramid chapels.

The western cemetery was the burial place of minor royalties and noble families, and covers much the same period as the northern cemetery.

Two other noted Meroitic sites are Nagaa and Musawwarat.⁹ At Nagaa there are the ruins of several temples. The best preserved is a small building with a pylon, which was dedicated principally to the Lion-god Apezemak and is now generally known as the Lion Temple. It was built by King Netekaman (15 B.C.—A.D. 15) who, with his steatopygous queen, Amantere, is represented slaying captives in the Egyptian manner on the face of the pylon. The largest temple at Nagaa, dedicated to Amon, was also built by Netekaman, but little remains of it now except the doorways and a number of stone rams. It is thoroughly Egyptian in style, and the usually accepted

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explanation of this is that Netekaman imported Egyptian workmen to restore the temple at Barkal and employed these same men on his temples at Nagaa. There are the lower courses of other buildings which probably belong to this period, but the small square "kiosk" near the Lion temple is later. It is in the Roman style of the second or third century A.D., but it is quite devoid of inscription and its use is obscure. The remains of other, smaller shrines in the vicinity of Nagaa have been found from time to time.¹⁰

Musawwarat is an archæological puzzle. Here we have an enormous complex of buildings, passages, and stairways, with no clue to their builder and no indication of the purpose they were intended to serve. They seem to have been the work of a single generation and to have become derelict after that generation had passed away. The date of these buildings may be the second or third century A.D., about the same period as the "kiosk" at Nagaa.

In the northern part of the country most of the towns founded in earlier periods were occupied in Meroitic times. Amongst the chief of these was Faras, which became an important town during this period and was to become even more important in Christian times.

Many smaller Meroitic sites are known in Berber and Kassala Provinces, and some still further south, chiefly along the Blue Nile.¹¹ Others may yet be met with by travelling officials. These sites are usually marked by scattered potsherds and sometimes by broken *red* brick or masonry. Meroitic bricks were much larger and flatter than are modern burnt bricks, and buildings were frequently covered with a hard white plaster which was subsequently painted. The presence of this plaster is a fairly reliable indication of a Meroitic site.

More often potsherds alone are the only evidence of

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- ancient occupation. Some experience is, of course, necessary for the correct interpretation of evidence of this kind, but in general it may be said that polished black or greyish-brown *decorated* pottery is probably Meroitic. Red pottery has been made in all periods, so that, although much of that now found is Meroitic, colour alone is no reliable guide to age. A good deal of painted pottery was made in the later Meroitic period, but the painted pottery found lying on sites in Halfa and Dongola Provinces is more likely to be Christian than Meroitic.

Stone rings are sometimes found on Meroitic sites. The exact significance of these is not known, but it is probable that they were used as stands for round-bottomed pots.

Occasionally Meroitic sites have been discovered through the accidental disturbance of ancient graves, e.g., at Makwar, Shendi, and Gordon's Tree near Khartoum.¹²

Other distinctive remains of this period are reservoirs. These ancient reservoirs or *hafirs* had substantial earthen banks, now, of course, somewhat denuded, and in some of them the stone pitching on the inner faces of the banks is still preserved. The remains of a building, possibly a shrine, are often found near the intake. There are several of these reservoirs at Nagaa and Musawwarat, and others are known in Berber Province and the Butana, e.g., at Basa, Um Soda, Alem,¹³ etc. Some of the hafirs recently cleared and re-conditioned in Kassala Province are of Meroitic origin.

Rock pictures or carvings are widespread, and examples have been found even in the remote western deserts.¹⁴ The subjects depicted are giraffes, horned animals, elephants, human figures, and boats. Giraffes are the most common, and it is worth noting that the giraffe was a frequent decorative *motif* on Meroitic pottery. The age of these rock pictures is difficult to assess. Some are

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quite possibly neolithic ; others are Meroitic, while others again are manifestly later. It is curious that the donkey does not appear in these pictures. The absence of the camel, except in late scratchings, is explained by its comparatively late introduction into the country, but the donkey has been in use since the earliest times. The most ambitious rock carving so far discovered is at Gebel Geili, between Khartoum and Kassala.¹⁵ This shows an unidentified late Meroitic king, and is in a different category from the animal pictures, to the date of which it does not necessarily afford a clue.

No details of the break up of the Meroitic kingdom have come down to us. There was an invasion of the Axumites from Abyssinia about A.D. 350 which ended the rule of the Meroitic dynasty of Ethiopia, but it is possible that even before this the country had been split up amongst a number of semi-independent petty kings. In the north, some of these evidently at a later time attained considerable wealth and power. Their graves are marked by earthen tumuli, and groups of these are found at Gamai, Wawa, and Firka (Firket), all in Halfa Province. Those at Gamai were excavated in 1915, and the large group at Firka is now (1934) being excavated. The date of these tumuli is roughly in the neighbourhood of A.D. 600.

Christian Period. A.D. 600–1200.

Christianity spread to the Sudan from Egypt and not from Abyssinia, and the conversion of the country seems to have been complete about A.D. 600. It is not clear when or why the division into the two kingdoms of Aloa and Mukarra took place, but the boundary between the two was probably somewhere near Abu Hamed.

Very few remains of the Aloa kingdom are known ; but as most Christian churches in the Sudan, as in Egypt,

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- were built of crude brick, it is not surprising, for climatic reasons, that those in the southern kingdom have not survived. The only building remains are at Soba, where a few fallen column drums and capitals mark the site of a Christian church. Two capitals from here have been removed to the Anglican cathedral in Khartoum. Soba was a Meroitic site before the introduction of Christianity, and the stone ram from there, now also in Khartoum, would indicate the existence of a Meroitic temple to Amon before the Christian church was built.

Bricks and a little pottery of the Christian period have been found at Geteina, and at Burri near Khartoum,¹⁶ and some evidence of Christian occupation has been noted at Kamlin and Sennar. Aloa pottery of about the eighth century has been found at Wad el Haddad, but the earlier Aloa ware is not sharply differentiated from the late and post-Meroitic pottery. There are in consequence a few sites in Berber Province and south of Khartoum which cannot yet be definitely assigned to one period or the other.¹⁷

In Dongola and Halfa Provinces, which roughly cover the area of the kingdom of Mukarra, known Christian sites are numerous. In Halfa Province the chief building remains are north of Wadi Halfa, where at Serra and Faras there still exist churches in a fair state of preservation considering the material of which they were built. Churches also existed in this region at Adendan, Argin, and Debeira. South of Wadi Halfa there is evidence of Christian occupation at Gamai, Mayanarti, and Kulb, and remains of buildings on Sai Island, and at Saddenga as already noted. The remains on Sai Island consist of four monolithic granite columns, all that remain of a church near the middle of the island, and there are re-used stones of another church in the "castle."

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In Dongola Province the principal buildings are the mosque at Old Dongola, which was originally a Christian church, and the ruins of a monastery at Wadi Ghazali, a few miles inland from Meroë. Christian pottery has been found at many sites in this province. In fact, nearly all the ancient sites in Dongola which have not already been mentioned are Christian.

The kingdom of Mukarra, after some centuries of resistance to Muslim penetration, finally collapsed in the thirteenth century, and the kingdom of Aloa was later overwhelmed by the Fung from the south.

Mohammedan Period

In the northern Sudan there are a number of "castles" or forts, of which the larger and more elaborate such as those at Kasr Wad Mimiri, Khandak, and El Kab belong to the sixteenth century. A simpler type consists of a plain, rough stone wall, without bastions, enclosing a rectangular space, and several of these are known in Berber Province and some in Halfa Province. These have not been satisfactorily explained, but they are possibly not much later in date than the larger castles. The occasional castles of mud brick were either the strongholds of tribal chiefs during the seventeenth and eighteenth centuries or were built during the rule of the Turks.

In the eastern Sudan Muslim tombstones of the tenth and eleventh centuries have been found (by Mr. Crowfoot) at Akik, on the coast south of Tokar.¹⁸ At Maman, Khor Gamarota, and elsewhere, are groups of stone structures which have been called "Anak houses," but Mr. Crowfoot has indicated that these are in all probability *gubbas*, erected as tombs by some tribe or tribes whose memory has entirely faded away, and they may be five or six hundred years old.¹⁹

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- 1 *An Outline of the Ancient History of the Sudan* by G. A. Reisner, Vol. I, part 1, p. 3; part 2, p. 57; part 4, p. 217; and Vol. II, part 1, p. 35. Dr. Reisner subsequently slightly modified the chronology given in the fourth part of this *Outline*, see (6) below.
- 2 *Excavations at Semna and Uronarti* by G. A. Reisner, Vol. XII, part 2, p. 143.
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Harvard-Boston Excavations by N. F. Wheeler, Vol. XV, part 2, p. 251.
- 3 *Excavations at Kerma* by George A. Reisner. A review by J. W. Crowfoot, Vol. VII, part 1, p. 113.
- 4 See (2) above.
- 5 *Historical Inscriptions from Gebel Barkal* by G. A. Reisner, Vol. IV, part 2, p. 59.
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Although the rock pictures dealt with in this article are actually in Egypt, they are of the same general character as many in the Sudan.
- 15 *Meroitic Remains* by G. O. Whitehead, Vol. IX, part 2, p. 51.
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THE COMING OF THE ARABS TO THE SUDAN

By SIR HAROLD MACMICHAEL, K.C.M.G., D.S.O.

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The motives which brought the Arab tribesmen to Egypt in A.D. 639 and the years which followed are familiar to all students of history. They are common to all the phases of the great religio-racial movement which marked the rise of Islam in the first half of the 7th century ; but it may, I think, be contended with justice that the movement was not so exclusively religious in character as it is sometimes represented to have been. To the " Franks " of Western Europe, and perhaps to other races from the Straits of Gibraltar to the banks of the Oxus, the most striking and ominous feature of the amazing portent may have been its heresy, and naturally the records compiled by the clerics would allude to the invading hordes primarily as infidels ; but there were other causes at work and other motives. I hope, in saying this, not to be misunderstood. It would, of course, be ridiculous to argue that the primordial force, which stirred the Arabs into sudden action and first inspired their leaders to conquer new worlds, was not religious

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fervour, or that religion has not played a leading part in the life of the race at all times ; but neither must one forget the tendency of a surplus population to seek subsistence beyond the borders of its own poor territory, nor the fact that at all times and in all places the unchanging Arab of the desert has always been swayed by thoughts of loot and pastures new. So long as he is happy and contented, the Arab is not particularly prone to intolerance in religious matters, but, thrown off his balance by injustice or unexpected hardship, or excited by hopes of sudden aggrandisement, ingenuously he clothes with the sanctions of religion any atrocity he may feel moved to commit, and his native fatalism renders him regardless of consequences.

Thus, when once the Byzantine province of Syria had fallen, the Arabs streamed into Egypt with 'Amru ibn el 'Āṣi, inspired by a religious enthusiasm which derived an added fire from the anticipation of profit and glory, and each year came thousands more in the wake of fellow-tribesmen or newly-appointed Governors. A few settled in the towns, and many pushed on westwards, in alliance with the Berber tribes, to Tripoli, Tunis, Algeria, Morocco, and even Spain ; but many others, who had brought their flocks and herds of sheep and camels with them, remained in Egypt to follow the ancient way of moving from one pasturage to another with the season of the year. They were not allowed, in the early years, to acquire land, for their leaders had no desire to see them adopt sedentary habits and lose their zest for war.

Of the Arabs who passed westwards from Egypt to be absorbed ultimately into the population of North Africa it is unnecessary to say more than that in the course of centuries some moved southwards into what is now Nigeria and French Equatorial Africa, and that an

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insignificant proportion may have found their way thence eastwards into the Sudan. But a brief sketch of the history of those Arabs who remained as nomads in Egypt is necessary for a full understanding of our subject.

First, however, let us not forget that long before the rise of Islam there had been some Arab infiltration both into Egypt and the Sudan. Arab merchants, seeking gold and ivory, slaves and spices, had been in the habit of crossing the Red Sea, the Straits of Báb el Mandeb and the Isthmus of Suez from the earliest times of which history has any knowledge, and the process was intensified in the Roman and Ptolemaic periods. Some of these traders, no doubt, settled in Egypt and the Sudan, and it is likely that they were joined by others, fugitives or friends. Moreover, in the two centuries before the Christian era, and later, many Himyarites from southern Arabia had crossed over into Abyssinia, and, while some had settled there, others had worked their way across to the valleys of the Blue Nile and the Atbara, and so northwards into Nubia proper. There are even indications that some may have found their way westwards across Kordofán and Dárfur. The point I would make is that at the time when bodies of Mohammedan Arabs were moving southwards through Egypt in the centuries following the conquest of that country, the Sudan was not an absolutely unknown land, for, notwithstanding the barrier of the negroid Christian kingdom of Dongola, which checked their course as conquerors or migrant tribes to the south of Aswan, the Nile had been a trade route for men of their race for ages past.

To revert now to the Arabs who sojourned in Egypt. They were a medley of tribes: some were Qaḥṭánites, originally from the Yemen, accounting themselves the purest Arab stock; others belonged to 'Adnánite, that

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is, Ismáílític, branches from central and northern Arabia and Syria, who had now achieved superiority by virtue of their including the Prophet's own tribe of Quraysh. Among the former group the greatest tribal names were, perhaps, those of the Beni Qudá'a, who included, theoretically, the Beli, the Beni Kelb and the Guhayna, and Táí, who included, theoretically, Gudhám and Lakhm, el 'Azd, 'Aus and Khazrag (the "Ansár" or "Helpers" of the Prophet). Among the Ismáílític group were prominent Qays 'Aylán, Rabí'a, Kenána (including Quraysh, Beni 'Abbás and Beni Ommayya), Sulaym, Hawázín, and a host of others.

But here it is as well to stress a point which is of some importance in this context. Although the Arabs, brought up to think in terms of patrilinear genealogy and exhorted by the Prophet himself to keep the record of their pedigrees, were wont to speak of Qaḥṭán and Ismáíl respectively, as though they were the forbears of them all, and though each individual of a great congeries such as the Beni Táí or Rabí'a or Kenána would claim to be the direct lineal descendant of the eponymous ancestor of his tribe, it must be obvious that such claims were generally ridiculous. Were there, for instances, no other Arabs in the days of Ismáíl, and did they leave no progeny? The fact of the matter is, of course, that their genealogies were largely fictitious and their tribes were shifting conglomerates of more or less kindred families rather than subdivisions of a single unit. Moreover, El Hamdání confirms what might have remained a mere suspicion when he tells us that it was not uncommon for the Arabs to take advantage of coincidences of nomenclature to claim kinship with well-known tribes with whom they had no tangible connection at all. It was with this in mind that I used the word "theoretically" above when speaking of certain tribes as

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"including" others. Traditionally they did so; in fact, the relationship was usually remote. Thus, to take an instance at random, though Gudhám and Lakhm were reckoned by the genealogists to be branches of Beni Táí, they probably had little more in common with the Beni Táí, who were known specifically by that name as a tribe, than had most of the other tribes in the northern half of the peninsula. Habits die hard among the Arabs, and we find these ancient distinctions between the sons of Qaḥṭán and those of Ismá'íl transposed into terms of Guhayna versus 'Abbás and firmly held in the Sudan at the present day—the same tendency to fake a genealogy; the same advantage taken of coincidence in names.

As tribal units, however, the Arabs entered Egypt in the 7th and following centuries. Let us take some leading examples. Many Gudhám were settled from the conquest until the year 1400 or so in the eastern Delta, and some of them, the Beni 'Uqba, after breaking away at some period to join the Beni Hilál, appear again later in the Sudan among the Kabábísh of Northern Kordofán. The main movement to Egypt of the Beni Táí proper appears to have taken place some 200 or 300 years after the conquest. They settled in Beheira Province and were joined by many fellow-tribesmen during the ensuing years. The Tha'aliba branch of Táí are now, it appears, largely represented among the cattle-owning Baqqára of the Sudan.

The Guhayna—and it is from an 'Abdulla el Guhani' that half the Arabs of the Sudan claim descent—came originally from the Hegáz, where their modern representatives, still called by the same name, live at the present day. They were early converts to Islam, entered Egypt at the conquest, and in A.D. 647 took part in the first Libyan expedition. We shall see numbers of them,

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with Rabí'a, invading the Beja country (the Red Sea Hinterland) 200 years later, and their kinsmen finally dominating Upper Egypt and sweeping thence over the debris of the Nubian kingdom into Kordofán and Darfur and up the Nile towards Abyssinia in the 13th and 14th centuries.

The homeland of the Kenána and the cognate Quraysh, who, of course, included Beni 'Abbás and Beni Ommayya, was in the Hegáz and Tihama. Many of them entered Egypt in the early years of Islam and, as was natural, a large proportion of the earlier Governors appointed to that province were Beni 'Abbás and Beni Ommayya. By the early part of the 15th century they were numerous in Upper Egypt with the Guhayna, and there is also evidence that at least one party of Beni Ommayya crossed the Red Sea direct into the Sudan in the 8th century, and settled there. There are several large groups of Kenána, cattle-owners for the most part, in the Sudan at present, and the claim to be descended from Beni 'Abbás, though unsubstantiated, is common to most of the riverain tribes in the north.

The Fezára—a name by which in pre-Dervish days most of the camel-owning nomads west of the White Nile were commonly known—were, at the time of the conquest of Egypt, an independent branch of Ghatafán and so traditionally descended from Qays 'Aylán. They also hailed from the vicinity of Mecca, and numbers of them migrated to Egypt in the 7th century, and further contingents followed in the 11th century with the Beni Hilál.

Rabí'a, a great Arabian tribe, sent a large quota to Egypt in the middle of the 9th century, and these appear to have pushed as far southwards as they could with all speed. We shall see them accompanying the Guhayna in 869 into the Beja country, preferring to search for

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gold and emeralds and lord it over the local natives rather than to pay taxes in Egypt. Others settled on the confines of Nubia near Aswan, and these latter also established a local overlordship which was recognised about A.D. 1000 by the grant of the title of Kanz el Dowla at the hands of the Fatimids. Their intermarriage with the local Nubians is probably responsible for the name Kanzi (*pl.* Kenuz) which is applied to a large section of the Berberine stock still resident between Aswan and Halfa.

Scores of other Arab tribes were also, of course, represented in Egypt both at the time of the conquest and in the centuries which followed, and Makrízi has left us a comprehensive list of them as they were in his day; but it would be tedious and unprofitable to take each in turn and try to trace which of them found their way into the Sudan, and which remained, as many, of course, did, in Egypt.

The question then arises: Why, when, and how did so many of these Arabs go to the Sudan? Also: Of the Arabs now in the Sudan, did none come direct across the Red Sea? The latter question is difficult to answer, but it need not detain us long. Tradition in the Sudan would have it that many of the tribal ancestors came by way of the Red Sea ports, but tradition is suspect, for it would also have us believe that these ancestors were either of royal blood, 'Abbásid or Ommayyad, or at least noblemen from the holy places, and, true to type, takes no count of the thousands of forbears who could have laid no claim to either. Unquestionably, occasional families entered the Sudan by this route, in search of trade or the rewards expected by the learned from the ignorant, or as refugees; and other tribesmen may have crossed over seeking the pastoral life in congenial surroundings, as, within recent years, certain Rasháida have done; but I am unaware

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of any evidence to show that there has ever been wholesale tribal movement to the Sudan by way of the Red Sea in the sense in which such tribal movement has certainly taken place through Egypt and up the valley of the Nile. The best that could be said for the opposing theory is that the movement of Arabs through Egypt is known because Coptic and Mohammedan historians recorded it, whereas there was no one to chronicle what happened on the Red Sea coast.

Now, leaving aside for the moment the question of dates and circumstances, let us consider the reasons why the Arabs tended to migrate from Egypt to the Sudan. In brief, there was better pasturage for their animals, less fear of the tax-collector, and more hope of loot and slaves. They were more likely to be left alone. On the other hand there were serious limiting factors, namely the age-long disinclination of those who sat in the seats of Pharaoh to let them go, and a very natural unwillingness on the part of the rulers of Nubia to let them past the narrow river gateway of the Sudan.

Let me say a few words more on some of these points. Egypt is not an ideal country for the nomad. Its rainfall is negligible, and there is a superfluity of cultivation. The Sudan, on the other hand, excluding the southern provinces, has much in common with Arabia. To anyone with a knowledge of the Sudan, there is hardly a description given by Palgrave or Doughty, or indeed by any other Arabian traveller, of the desert grazing grounds, the bleak sun-blackened hills of wasted sandstone, or the more kindly valleys fed by springs or rainfall, that might not be applied, almost word for word, to some part of the country lying inland from the Nile, on either side of it, to the north of Khartoum. The same trees occur, the same grasses, the same barren outcrops of rock, the same sandy wastes.

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The Red Sea is, in fact, no more than an accidental rift which some convulsion of nature has interposed between two parts of the same country, though the western part has been more fortunate in that the Nile has forced its way through it from the mountains of Abyssinia and the Great Lakes, providing, in its northern reaches, the riverain cultivator with heaven-sent means of cultivating the banks by pump or water-wheel.

But south of Khartoum, to east and west, from the Abyssinian border to the watershed of the Shari and French Equatorial Africa, the country broadens out into more fertile sandy areas, with rainfall sufficient to give excellent grazing for large flocks and herds, and good crops of corn. Beyond this broad belt, again, the country becomes sub-tropical, with ever heavier rainfall as one goes south, the vegetation becomes denser, the ground more broken by ravines, soil replaces sand, and cattle replace the camel.

Then, further south, papyrus marshes clog the slow-flowing White Nile which

strains along

through beds of sand and matted rushy isles . . .
. . . a foil'd circuitous wanderer . . .
and inland, beyond them, the forest-covered hills rise to
the Nile-Congo Divide.

The marshy regions of the south are peopled by long-shanked cattle-owning negroes, the hills by a smaller but more industrious type. Neither concern us here. But all the broad central belt of the Sudan, the fringes of the heavily-watered marshy area to the South of it, and the habitable parts of the desert to the north of it, are now predominantly Arab.

One can see what happened. As the Arabs gravitated southwards through Egypt they heard of wide pasture

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lands eminently suited to their camels and sheep—at this time they probably owned no cattle—and when they were able to sample the promised land they found themselves upon familiar ground among familiar conditions. Most of them therefore stayed there with their beasts ; but others, pressing further afield, acquired cattle—the tsetse fly would not have let the camel live, even were other conditions favourable—and took up their abode between the negroes of the south and the camel and sheep-owners of the north.

But the lure of pasturage was not the only inducement to the Arab to move into the Sudan. For the first 200 years or so after the conquest of Egypt its rulers were themselves Arabs, and so understood Arabs and their ways. I would ask you to let me quote to you Doughty's description of them : " The destitute Beduw in their idle tents . . . if any blame them they answer in this pensive humour : ' Aha, truly the Aarab are *behâim*, brute beasts ; *masâkîn* . . . *kutaat ghranem*, dubbush, a drove of silly sheep, a mixed herd of small cattle ; *juhâl*, ignorant wretches ; *mejânîn* lunatic folk ; *affintn*, corrupt to rottenness ; *harâmiyeh*, law-breakers, thieves ; *kuffâr*, heathen men ; *mithil el seyd*, like the fallow beasts, scatterlings in the wilderness, and not having human understanding.' And when they have said all, they will add, for despite, of themselves, ' *Wellah, el Aarab kilab*, and the nomads are hounds, God knoweth.' But some will make a beggarly vaunt of themselves, ' The Aarab are *jinnies* and *shayatîn*,' that is witty fiends to do a thing hardily and endure the worst, without fear of God."

By the middle of the 9th century the Arabs, who had been encouraged by circumstances to migrate from Arabia tribe by tribe or section by section, were numerically

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preponderant in Egypt; but a change now took place which was of vital moment to them. The Governors of Egypt, with the rise of Ibn Tulūn in the year 868, ceased to be Arabs, and a series of despotic Turks, Berbers and Mamluks held the reins of government until the conquest of the country by Selim I of Turkey, in 1517. The result to the nomad Arabs was disastrous. They were regarded with no favour or sympathy by anyone. To the native Copts they and their animals were interlopers and a nuisance; to the warlike ruling classes they were contemptible, for, as compared with the trained troops of the standing army, they were useless save for skirmishing or conducting a foray that promised loot. As taxpayers they were elusive and not particularly productive when caught. As subjects they were a perpetual source of anxiety. Periodically they rose in rebellion, though never with success, and by the beginning of the 14th century they were regarded as little better than outlaws. As a natural result, the tendency of the Arab was to get away as far as he could from the iron hand of despotism and the turmoil of precarious uncertainty. "All disorder," Mr. Algernon Cecil has lately remarked, "opens the way to a new and perhaps more advantageous shuffle in the perennial game of grab," and the Sudan offered an obvious line of escape; the expeditions which were periodically despatched against the Nubians, an opportunity.

So much for the incentives urging the Arabs southwards. A word must now be said of the main difficulty that was involved, and the manner in which it was surmounted.

Beyond the first cataract the Christian kingdom of Nubia, with its capital at Dongola, and territories extending to what are now the cotton fields of the Gezira lay athwart the river. To the east and north-east were the wild nomadic Beja tribesmen (the Fuzzie of the present

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day), to the west an almost waterless desert. This kingdom had been founded upon the ruins of the old Meroitic system in the 6th century A.D., and converted to Christianity shortly afterwards by a priest sent thither by Theodora, the Empress of Justinian. Its people were negroids, a blend of pre-dynastic Egyptian and Libyan stocks diluted by many centuries of negro admixture from the South. For some 600 years after the Arab conquest of Egypt—a period, be it remembered, as long as that between the accession of Edward III and the present year of grace—this barrier held, though latterly there was heavy seepage. Then, in the 13th and 14th centuries it crumbled away entirely.

The course of events may be roughly summarised as follows :—

As soon as 'Amru ibn el 'Āṣi had taken possession of Egypt he sent 20,000 Arabs under 'Abdulla ibn Sa'ad to invade Nubia. A tribute of slaves was imposed, but the expedition does not appear to have advanced any distance up stream. Ten years later, 'Abdulla, now Governor of Upper Egypt as far as Aswan, made a second expedition which penetrated as far as Dongola and destroyed the church there. A treaty of peace and security was then made. Its terms, remarkable for their moderation, precluded either party from settling in the territory of the other, ensured protection for the mosque which had been built on the outskirts of Dongola, and provided for the payment of a yearly tribute of 360 slaves. This treaty, with interludes of trouble, remained in being for about six centuries. It probably owed much of its permanence to the fact that, in return for the payment of the tribute, the recipients were wont each year to give handsome presents to the Nubian chiefs.

For a century or two after the conclusion of this agree-

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ment—so long, in fact, as Egypt remained under Arab control, relations between Arab and Nubian seem to have been fairly amicable, for neither party had much to gain from irritating the other; but in the course of time friction arose between the Arabs and the Beja tribes to the east owing to the latter's propensity for raiding into Upper Egypt. In the first half of the 9th century a punitive force had to be sent against them and, as a result, a treaty was concluded in the year 831 on terms similar to those of the Nubian treaty. It would seem, however, that the Arabs, who had recently experienced some difficulty in the matter of the Nubian tribute, took the opportunity to instigate the Beja to raid Nubia instead of Upper Egypt if raid they must. In spite of this, twenty years later, we find the Beja raiding Edfu and Esna. They were suppressed by the despatch of two forces, one from Kus on the Nile and the other from the Red Sea coast.

But the days of Arab rule in Egypt were by now drawing to their close, and the change is reflected in the relations between the Arabs and the Nubians. Within a year of his succession Ibn Tulūn sent large levies of Arabs, Rabi'a and Guhayna for the most part, against the Nubians and the Beja. They were not unsuccessful, but few of them returned, for a period of extortion, anarchy and bloodshed had begun in Egypt, and it was no place for the free-lance Arab. Rabi'a and Guhayna, therefore, chose the better part and settled, some in the vicinity of Aswan with the Nubians, others among the Beja between the Nile and the Red Sea coast. These settlements and the inter-marriage consequent thereupon are of importance, for, as we shall see, they were the prelude to the eventual disintegration of the indigenous institutions. Indeed, in the case of the Beja, it appears that the Arabs almost

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at once achieved an overlordship, and a racial fusion took place of which the modern fruit is the pastoral 'Abábdá, Bishárin, Beni Amer, Amarar, Hadendoa group of tribes, who are Mohammedans and, together with many Arab ways, have adopted an Arab lineage, while preserving, as a general rule, their native languages, their fine distinctive physique, and many of their ancient customs. On the Nile, the kingdom of Dongola was to survive for many years to come, but changes were taking place already, and, by the close of the 10th century, we find that Nubian converts to Islam were not uncommon in the borderland, and that Mohammedan settlers had acquired lands there and become practically independent. Henceforward, extreme Upper Egypt and the northern fringes of Nubia were to become more and more a focus for the immigration from Egypt of Arabs to whom life was being made a burden by the tyranny of successive alien dynasts. These dynasts, as a rule, had little time to spare from their commitments in Lower Egypt and their foreign wars for the poor and distant region of Nubia, but slaves were always a weighty consideration, and perhaps it is worth mentioning that even the great Saladin (Saláh el Dín) found time to send two expeditions there. Neither penetrated to any distance—they did not even reach Halfa or the present boundary—but in the second (i.e., in 1172-3), the fortress of Ibrím was stormed, the church pillaged, the Bishop tortured, and 700 pigs killed. Of greater moment is the fact that a year later not only did a Nubian force invade Egypt—quite unsuccessfully—in the Fatimid interest, but it was a mixed force of blacks and Arabs led by that Kanz el Dowla who was mentioned earlier as chief of the Arab-Nubian congeries which occupied the neighbourhood of Aswan.

We obtain a glimpse of Nubia from Abu Sálíh, the

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Armenian, at the beginning of the 13th century, and find the barrier of Christian Dongola still held. But in 1250, the Bahrite Mamluks supplanted the 'Ayyūbids, and 10 years later the great Baybars came to the throne. In 1275 and 1276 he sent expeditions to exact tribute and carry fire and sword through Nubia, and the personnel employed were mainly Arabs of Upper Egypt. They reached Dongola, and from now onwards the Nubian power began to crumble. Internal dissensions broke out, and there was no longer a united front. Above all, it must be remembered that in Nubia a system of matrilinear inheritance obtained, under which the Arab chieftain by marrying the sister of the ruling magnate ensured the succession to his son, the offspring of the union. This is a factor of the first importance in considering the ways and means by which the Arabs obtained a foothold in the Sudan, and it is frequently overlooked. It is not, however, suggested that it was only thus that the Arabs were successful. They had the power of Egypt behind them in the first instance, and they were no longer content to live in neighbourly amity with a people whom they saw a chance of despoiling, nor to remain longer than they needed in a country where they were treated as outcasts when they might enjoy freedom beyond the oppressor's reach.

One expedition after another invaded Nubia in the days of Kala'un, the Turkish usurper who had seized the Egyptian throne two years after the death of Beybars, and of his successor; the Nubians retreated as the foe advanced, and advanced as he retreated, but Dongola was lost, and the Arab tide had begun to flow. By 1311 there is a Mohammedan black—to judge by his name, 'Abdulla Sanbu—calling himself king of Nubia; he in turn is killed by Kanz el Dowla, and the latter is accepted by the Nubians as king.

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Already, we have seen, the Beni Kanz and other tribesmen had settled down round Aswan and coalesced with the original stock, and now to the south, in the words of Ibn Khaldūn, "thus was the [Nubian] kingdom disintegrated, and it passed to certain of the Beni Guhayna from their mothers, in accordance with the custom of the infidels as to the succession through the sister and the sister's son.

So their kingdom fell to pieces, and the 'Aarab of Guhayna took possession of it." Rapine and disorder, says Ibn Khaldun, were the results, and there was no discipline. "There is no vestige of authority in their land, but they remain nomads following the rainfall like the 'Aarab of Arabia."

Of the routes followed by the Arabs—Guhayna, Fezára and a host of others—there can be no doubt. Some, perhaps, may have broken away south-eastwards from Aswan and Korosko and made for the sparse vegetation of the Beja country, but in that direction the routes are difficult, water is very scarce, and herbage scanty. The great majority must have followed the line of the river through Dongola, and, though some may have stayed there, or wandered westwards to the Wadi el Qa'ab, the bleak, bare deserts lying still farther west could have offered no attraction, and it was to the south and south-west that the Arab hordes moved, from Korti along the line of the Wadi el Mukaddam and from Debba along that of the Wadi el Melik into Kordofán, and thence spread fanwise into Darfur to the west, and along the White Nile, or across the so-called "Ba'uda desert," or up the Atbara and the Blue Nile south-eastwards towards the frontiers of Abyssinia. No doubt they met with opposition from the natives; no doubt for many years sporadic fighting took place—there are no records—no doubt whatever, too,

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intermarriage took place, but the eventual outcome at least is clear. Gradually the plains of the northern and central Sudan, excepting always the Red Sea Hinterland where the Beja, albeit with Arab infusion, preserved their independence, fell to the invaders, and between them and such of the older inhabitants as were not forced southwards or to the hills a merger of races took place of which we see the obvious results at the present day in the case of all but the most nomadic of the camel-owning tribes.

Two hundred years after the final collapse of Dongola, at the beginning of the 16th century that is, we find the powerful Arab chieftain of the Rufá'a, who had his headquarters in the neighbourhood of Querri, a little north of Khartoum, engaged in a formal alliance with the Mohammedan Sultan of the negroid Fung, who, moving up from the south, had lately founded his capital at Sennár on the Blue Nile and, incidentally, inaugurated a dynasty which lasted until the Turko-Egyptian conquest of 1821. These Fung had lately won a victory over the Christian blacks, the ruins of whose churches are still to be seen between Sennár and the junction of the Niles, and the main object of the Arab alliance appears to have been the extirpation of the remainder of the aborigines. Similarly, a century later, in the far west, in Darfur, in the great range of Gebel Marra, we hear of another Arab chieftain as marrying into the royal house of the Fur, and so becoming the first of a line of negroid Sultans claiming Arab descent, of whom the last ceased to reign only twelve years ago.

In the case of the Fung-Arab alliance the blacks remained the predominant partners. Its immediate consequences were the subjugation of the country within a wide radius of the junction of the rivers, and, according to the native records of the Sudan, which now for the first time provide us with data, a considerable further

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influx of Arabs of heterogeneous origin from the north. Some of these may have been nomads, seeking security of pasturage and opportunities of acquiring slaves ; others were settlers—many of them “ holy men ” hoping for grants of land and slaves in return for such services as they could render in the way of teaching the true tenets of Islam, performing “ miracles,” and providing noble pedigrees for such as could afford the luxury. This latter class—the “ holy man ”—were extremely successful ; the pastoral Arabs less so, for within a generation the Fung rulers were strong enough to dispense with their aid and extort heavy taxes from them.

The doors of the Sudan were now wide open. There is no evidence of any further tribal movement to the Sudan on the grand scale, but there has been infiltration by small groups at successive periods, both by way of Egypt and the Red Sea.

And here I might perhaps close my story. I feel, however, that it would be rather incomplete if I did not say something in very brief and general terms as to what has become of the Arabs whose entry into the Sudan I have tried to describe.

They fall roughly into three groups, which are determined by the geographical conditions of the country and the kind of animals owned. To the variations of the country, inland from the river, I have already alluded : roughly speaking, there is desert in the extreme north ; then open steppes with sparse but healthy vegetation and shallow *wadis* ; then, a spacious richer sandy country, fairly well-wooded, with a moderate rainfall, capable of producing good crops of millet and sesame ; then, on either side of latitude 12°, a broad belt of thickly wooded country, less sandy but well suited to cattle, and, finally, beyond it, the vast sub-tropical negro country. Cutting

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straight across these successive belts from south to north with a very gentle gradient, runs the White Nile, which is joined at Khartoum by the Blue Nile, flowing with steeper gradient from the mountains of Abyssinia.

The shelving banks of the river, particularly in its more northerly reaches, have been cultivated by dibbling from immemorial ages as the flood recedes, and the higher ground has been reached by simple water-raising devices.

Along the river banks the population has naturally been more dense at all times, and more sedentary. Inland, wherever conditions permit—everywhere, that is, except in the extreme north—life is more pastoral in character, though many townships and villages have, of course, been formed. When the rains break and camel-owners move northwards, from about August to November or later, to clean pastures—those on the west side of the river towards the southern confines of the Sahara, those on the east to the plain of the Butána, inland between the River Atbara and the Blue Nile. The Baqqára, similarly, who during the dry weather can take their cattle southwards to the fringes of the negro country, have perforce to move in April and May, when the country is flooded, to the sandy districts of the central zone.

When the Arabs entered the country they probably found conditions much as they were until recently so far as the growing of crops and the raising of sheep and cattle are concerned. Those who settled at an early date in the riverain districts without displacing the earlier inhabitants *en bloc* would tend to become absorbed racially and culturally by them; but away from the river, tribal life survived to a far greater extent. The camel-owner in the north would find the field fairly clear and opposition slight, but in the central belt and southwards there was a numerous population of blacks who must have resented

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and resisted the arrival of the interlopers. The methods whereby the difficulties were overcome may have differed widely in different areas, but all the evidence points to the fact that, except in certain regions such as the Nuba Mountains, where the Arabs still possess the plains and the negroes the hills, victory was more usually won by agreement and intermarriage than by force of arms. Briefly, it may be said, the main feature of the ethnic history of the northern and central Sudan from the end of the 13th century onwards has been the gradual coalition of Arab and black (and, in the northern riverain districts, Berberine) into a series of groups, the justification for whose universal claim to be Arabs varies very widely. It is really strong among the sallow camel and sheep-owning nomads of the north, and even among the dark, hawk-eyed cattle and horse-breeding Baqqára and certain of the northern riverain groups, but it is slight among most of the sedentary villagers. To speak in very general terms, these latter are the offspring of mixed marriages, whereas the darker strain often noticeable among the nomads is due to concubinage.

All alike regard themselves as tribal units. Some, namely the great cattle or camel-owning tribes, usually claim to be Guhayna or Fezára by origin; others, namely the bulk of the villagers settled on the river north of Khartoum and on the lower waters of the Blue Nile, and many of the large semi-negroid groups living inland arrogate to themselves a descent from 'Abbás, the uncle of the Prophet. The force with which the pretension is advanced is usually in inverse ratio to its probability.

In the case of these villagers, too, the term "tribe" is something of a misnomer, for their divisions are territorial rather than tribal, and the population of each district and village is very mixed. The most one can say is that there

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is a general similarity of appearance and habits, and, often, a common history. But in the case of the nomad tribes, though repeated permutations have taken place, and still from time to time take place, in the allegiance of the component sections, it is amazing to find how slight is the change that has occurred during the course of centuries. Miscegenation between the Arab and the semi-Arab, and breeding from the negro slave women, who were captured by the thousand during the Egyptian and Dervish periods, have left their obvious mark, and many customs have been borrowed from the land of their adoption ; but the fact remains that the nomad Arabs as a whole, and more particularly the womenfolk, are hardly distinguishable from the Arabs of western Arabia in appearance or in ways. In one respect, it is true, there is a marked difference at the present day, but it is one in which the administration of the Sudan may, I think, legitimately take a certain pride. Its policy is to avoid every form of unnecessary interference with the tribal life, to support the authority of the sheikhs so long as it is not grossly abused, and to encourage in them that spirit of responsibility and self-reliance and self-respect which provides the best guarantee of justice and security to the individual. The Arabs have now enjoyed these advantages to an ever-increasing extent for thirty years, their flocks and herds have increased enormously ; and while they still preserve the fine freedom and independence of spirit and the tradition of courtesy which has always been the pride of their race, they are losing something of the wildness, the bird-like fecklessness and irresponsibility, the propensity to battle, murder and sudden death, which still distinguish their nomadic cousins in Arabia.

A SUMMARY OF EVENTS IN THE SUDAN FROM 1819-1899

IT was in 1819 that Mohammed Ali Pasha, the ruler of Egypt, decided to invade the Sudan. His armies were set in motion, and without difficulty they took possession of the power which was already slipping from the impotent hands of a series of bickering native dynasties.

An administrative system of a kind was framed for the control of the northern districts of the country and the collection of taxes, and yearly expeditions were sent southwards in quest of slaves and gold.

By the middle of the century the power of Egypt, now ruled by Abbas Pasha, was firmly established in the north, and for some 120 miles south of the junction of the Blue and White Niles. But the population was becoming increasingly discontented and restive, and by 1857 conditions had become so deplorable that Said Pasha, who had succeeded Abbas Pasha in 1854, attempted a series of reforms. He visited the Sudan in person, proclaimed the abolition of the slave-trade and the reduction of taxation. He then returned to Egypt. Within a year or two things were rather worse than they had been before. Discontent was rampant, and such European traders as there were left in the country, having sold their stations to their agents; the latter then settled down to an extensive development of the slave-trade.

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The state of the country in 1861 is described by Sir Samuel Baker, who travelled southward that year through Khartoum to explore the interior and meet Speke, the discoverer of Lake Victoria Nyanza. The picture he draws is one of utter misery and ruin.

In 1863 Ismail Pasha succeeded to the throne of Egypt and determined to consolidate and extend his territories. He also realised that the force of public opinion in Europe demanded that steps be taken to check the scandal of the slave-trade. In furtherance of the first of these objects Suakin and Massawa were placed under Egyptian jurisdiction by an Imperial Firman issued in 1885. The tribute payable by Egypt to the Sultan was, at the same time, raised by £37,500 a year. Ismail at the same time laid a claim to certain other coastal areas which had once been held by the Turks or Arabs, and made plans for a railway to Massawa through the Bogos Province of Abyssinia. In the course of putting these plans into effect and of generally increasing his activities in the Eastern Sudan, his forces clashed, as was inevitable, with those of the Negus of Abyssinia.

In April of 1869 Ismail Pasha granted to Sir S. Baker powers over all the Nile basin south of Gondokoro, with instructions to annex it and effect reforms. Baker accepted the task and, in spite of many difficulties, started for the south in February, 1870.

Writing his impressions of the journey from Cairo to Khartoum, he says : " I observed with dismay a frightful change in the features of the country between Berber and the capital since my former visit. The rich soil on the banks of the river, which had a few years since been highly cultivated, was abandoned. . . . There was not a dog to howl for a lost master. Industry had vanished."

In May, 1871, Baker annexed Gondokoro, and a year

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later at Masindi he proclaimed Unyoro an Egyptian province. He organised military posts, entered into friendly relations with the King of Uganda, and did everything that was possible to stamp out the slave-trade in the territories annexed and on the Nile.

In August, 1873, Baker returned to Cairo, and the following year the Khedive appointed Charles George Gordon to continue his work of consolidation, exploration and reform, under the title of Governor-General of the Equatorial Provinces. His headquarters were to be at Gondokoro, and his sphere of control extended northwards to Kodok.

Throughout the course of 1874 Gordon, with an Italian, Gessi, as his right-hand man, laboured to fulfil the task appointed him. The native chiefs for the most part offered their submission, confidence was restored, communications were opened, and the slave-trade received a severe check. By the end of the year posts had been established at the Sobat junction, Nasser, Shambe, Bor, Latuka, Lado (whither the headquarters had been moved), Rejaf, Duffle, etc.

This same year, 1874, also saw considerable developments in the Eastern and the Western Sudan. In the west, Zubeir, the most powerful of the Bahr-el-Ghazal slave-traders, who had recently made himself entirely independent and had defeated a force sent against him by the Government, was engaged in a quarrel with the Sultan of Darfur, having meanwhile, not only received a full pardon, but been appointed Governor of the Bahr-el-Ghazal. He prepared to invade Darfur from the South, whilst the Government decided to do the same from the east. The plan was duly carried out, the Sultanate of Darfur passed under the dominion of the Khedive, and Zubeir was made a Pasha. He then proceeded to Cairo

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to press his claim to be made Governor-General of the new province, but was detained there. His son, Suleiman, was left in his place.

In the east, Ismail Pasha commissioned a Swiss, Munzinger, who was acting as Consul for Great Britain and France at Massawa, to occupy Keren, the capital of Bogos Province, bought from a treacherous Governor the territory of Ailet province, between Hamasen and Massawa, and annexed Harrar Province with the consent of its inhabitants. The Abyssinians sent a Colonel Kirkman, who was in their employ, and who had been with Gordon in China, to voice an appeal to Europe, but without any definite result.

In 1875 Ismail Pasha also bought from the Sultan of Turkey the port of Zeila and nominal rights to the coast as far as Berbera. He then despatched a force under Avendrup, a Dane, via Massawa to Ginda, of which Kirkman had been made Governor with a freehold for life. Avendrup seized Ginda and advanced on Adua, the capital, but he was heavily defeated at Gundet in November 1875, by the Abyssinians and lost some 1,800 men. A fresh expedition despatched from Cairo was defeated with even heavier loss at Gura in March, 1876, and the Egyptians were forced to retreat to Massawa and negotiate for peace.

In January, 1875, Gordon left Gessi at Kodok and started from Lado for the Great Lakes, proposing to find an opening for his Equatorial Provinces to the east-south-east and open a station at Mombasa or elsewhere. In the autumn, with the same object in view, Ismail Pasha despatched the "Juba River Expedition" under one McKillop. The anchorage at the mouth of the Juba River being found unsuitable, the expedition moved along the coast to Port Durnford and Kismayu, but their plans

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were found to clash with the interests of the Sultan of Zanzibar, which were safeguarded by Great Britain, and the whole project was dropped.

In the same year Stanley was exploring in Uganda, and it was chiefly as a result of the reports which he rendered on his return to England as to the state of affairs in that region that the great missionary movement of 1877-79 took place.

In 1876 Gordon made a treaty with the King of Uganda and sent Schnitzler ("Emin") to him as his representative.

In October of the same year Gordon returned to England; but in February, 1877, he was appointed by the Khedive Governor-General of the whole Sudan, including the Equatorial Provinces.

No lack of problems faced him. In addition to the crying need for reorganisation and reform throughout the country, there were serious troubles in the east and in the west. He went straight, in the first place, to Massawa, to try and find some *modus vivendi* with the Abyssinians and to reconcile the conflicting interests of the various parties there. But little could be done in the short time available, and the result of attempting to induce Walad Mikael to cease his aggressions upon the Negus, John, was merely to leave the latter free to attack Menelik, the ruler of Shoa.

Gordon then proceeded to Khartoum and set to work to reform the Administration. No sooner had he settled down to this than a revolt broke out in Darfur, and Suleiman, the son of Zubeir, who was now at the head of the slave-dealers in the south, at the same time adopted a threatening attitude. Gordon hurried to Darfur, effected a temporary settlement, and made an energetic attempt to stop the slave-trade which was in full blast. He then

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returned across the whole breadth of the Sudan to the Abyssinian border, where trouble had broken out afresh between the Negus and Walad Mikael.

Meantime, during the course of 1877, it had been found necessary to evacuate Masindi and Kisumu in the far south.

In April, 1878, Gordon paid a flying visit to Cairo, and thence to the Red Sea provinces and Harrar, where he had to dismiss the local Governor for a variety of mal-practices.

By July, Suleiman was in revolt in the Bahr-el-Ghazal, but Gessi, marching via Rumbek and Wau, eventually succeeded, after heavy fighting, in restoring some sort of order.

Later in the year, in the east, Harrar and Zeila were detached by the Khedive from Gordon's control.

In March, 1879, there was again trouble in the west, both in Kordofán and Darfur, and Gordon hastened to the support of the gallant Gessi. By May he had reached Kulkul on the western border, and on his return he met Gessi at Taweisha and heard from him the story of his crushing of the rebellious bands of slave-traders in the south. He then hurried back to Khartoum leaving Gessi to deal finally with Suleiman. This Gessi did; he took Deim Suleiman in May, 1880, surprised Suleiman himself in July, shot him, and hunted down his brigand bands in the following months. Suleiman's fellow robber-chief, Rabeh, escaped to the west, carved a kingdom for himself near Lake Chad, and was only brought to book in 1901 by the French.

In June, 1879, the Khedive, Ismail Pasha, was deposed and his son, Tewfik Pasha, was appointed in his stead.

In August Gordon paid another hurried visit to Cairo to confer with the new Khedive, and offered to go to

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Abyssinia with a view to effecting some settlement of matters there. The offer was accepted, but the Abyssinians made such preposterous claims that nothing eventuated. On his way back to Khartoum via Gallabat, Gordon was arrested by the Abyssinians and sent back to Massawa (December, 1879). This ended the second period of Gordon's activities in the Sudan.

The position at the end of 1879 was briefly as follows :

The Victoria Nile, at the north end of Lake Albert, was the Khedive's southern boundary. Masindi and Kisumu had been given up in 1877, Unyoro and other outlying stations in 1879. Emin Bey was Governor of the Equatorial Provinces with headquarters at Lado. Gessi was Governor of the Bahr-el-Ghazal. The Abyssinians were in a truculent mood to the east. To the west, Darfur and Kordofán were in a dangerous state of unrest. Gordon's time had been so fully occupied in rushing from one side of the country to the other to deal with urgent crises that it had been impossible for him to put into effect a twentieth of the reforms that were necessary.

In despair, Gordon resigned his post. He was succeeded by Rauf Pasha whom he had previously dismissed from the Governorship of Harrar. Massawa and the adjacent coast were placed under another Pasha ; Berbera, Zeila and Harrar under a third.

In September, 1880, Gessi, finding his position intolerable, resigned, and was succeeded by Lupton, the Captain of a Red Sea merchantman.

In May, 1881, the Mahdi first came to notice, and in August he proclaimed his divine mission of regeneration.

The revolt which followed was the inevitable outcome of the events of the preceding years. As Lord Dufferin wrote on the 14th December, 1883, to Lord Granville from Constantinople :

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“Whatever might be the pretensions of the Mahdi to Divine mission, his chief strength was derived from the despair and misery of the native population.”

Not only had the Mahdi proclaimed himself in the Sudan, but affairs in Egypt were in a parlous condition. The treasury was exhausted ; the finances of the country were in a state of chaos ; the army was unpaid, untrained, undisciplined, and seething with discontent. By 1882 “the whole framework of society in Egypt was on the point of collapsing,” the army had mutinied ; Arabi was practically supreme. The month of June, saw on the one hand, the Alexandria massacres, on the other, the heavy defeat of a numerous Egyptian force by the Mahdi to the south-west of Khartoum, near Gedir, and considerable accretions to the latter’s strength. Between June and the end of the year, things went from bad to worse in the Sudan, though Khartoum and the larger garrison towns were holding their own. In Egypt, Great Britain had been forced to step in and crush Arabi’s rebellion. By a decree of the 19th September, the local forces in Egypt were dissolved, and Sir Evelyn Wood was set the task of forming a new Egyptian army commanded by a British Sirdar and British and Egyptian officers. This force was, in its earliest stage, intended to be no more than a gendarmerie, and consisted only of two brigades of Fellahin. As the danger from the Sudan increased, it was expanded and came to be recruited partly from Egypt and partly from the Sudan.

In January, 1883, El Obeid had fallen. In the second half of 1883 the revolt spread, and in the Eastern Sudan Osman Digna invested the Egyptian Garrisons and won several engagements. In November Hicks’ army was annihilated to the south of El Obeid, and the Authorities came to the conclusion that Egypt would be

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well advised to abandon the Sudan, evacuate the garrisons and hold only the frontier, Suakin, Massawa and the Red Sea ports.

Gordon was chosen for the task of evacuation ; he arrived in Khartoum with the appointment of Governor-General in February, 1884, and proclaimed the Government's intention.

In the same month, in the Red Sea provinces, Valentine Baker's levies fled in disorder before a small force of Dervishes at El Teb and were massacred ; Sinkat fell and the position of Suakin became most precarious. British public opinion then became seriously alarmed and an expedition was sent under General Graham to relieve Suakin. By the 28th February about 4,000 British soldiers were collected at Trinkitat, and on the 29th they defeated the enemy with heavy losses on the site of Baker's *débâcle*. The troops then embarked for Suakin, whence, on the 13th March, they sallied forth and routed a strong Dervish force at Tamai.

These successes were, however, of no more than local effect, and a forward move by British troops to Sinkat and on to Berber, with a view to keeping open a line of retreat from Khartoum was mooted. The proposal was, however, rejected by the British Government late in March, and shortly afterwards the greater portion of the British garrison of Suakin was withdrawn. All regular communication with Khartoum was thus cut off.

"Then," in Lord Cromer's words, "followed four or five months of fatal indecision." April, 1884, saw both the surrender of Gedaref and the end of Egyptian authority in the Bahr-el-Ghazal. Emin still held the Equatorial Districts. On the 26th May Berber fell, and the Dervishes advanced northwards. Halfa and Korosko were consequently fortified and British troops sent to Aswan.

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Egypt formally abandoned the Somali coast in May, and in June a British mission arranged with the Negus of Abyssinia that, in return for the cession by Egypt of Bogos and Keren, he should assist in the evacuation of Kassala, Amadib and other garrisons.

By August the country was almost entirely in the hands of the Dervishes, though Gordon was still holding his own at Khartoum and the British Government had at last made up its mind to send an expedition under Lord Wolseley to render him assistance.

In September Colonel Stewart, sent by Gordon to meet the relief expedition, was murdered and the investment of Khartoum became complete and absolute. About the same time Great Britain took over Berbera and Zeila, Bogos was handed over to the Abyssinians and Harrar was evacuated.

By the 5th October Lord Wolseley had reached Wadi Halfa and by December the river and the desert columns were both advancing towards Khartoum. The latter won an important victory at Abu Klea in January, 1885, and pushed on to the river.

But it was too late. On the 26th January, 1885, Khartoum was stormed by the Dervishes, and Charles Gordon's life of unselfish devotion was ended by a spear-thrust.

The next phase was one of retirement. The troops sent to relieve Gordon returned to Dongola; Gallabat and certain other eastern garrisons were relieved by the instrumentality of the Negus, and the troops and civil population brought safely down to Massawa; Massawa itself was occupied about the same time by the Italians and its Egyptian garrisons withdrawn; Emin retired to Wadelai.

It was at first decided not only to hold Dongola, but to

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establish full control of the Red Sea Provinces and lay a railway to Berber, and General Graham was given a force of 13,000 British, British Indian and New South Wales troops for the purpose.

During March, 1885, these British troops fought several costly but indecisive engagements with Osman Digna, but, meanwhile, the policy of the British Government had undergone a complete change and orders were given for the suspension of the Suakin-Berber railway project, though Suakin was still to be held, and for the evacuation of Dongola.

About the same time, in June, 1885, the Mahdi died, and was succeeded by the Khalifa Abdullahi.

In July, 1885, Kassala fell and by November the Dervishes, bent on ejecting the alien from every part of the Sudan and carrying the war into Egypt, were in touch with the frontier field force, which consisted at the time of some 1,700 British and 1,500 Egyptian troops. The Dervish forces were defeated at the battle of Ginnis on the 30th December, 1885. Nubar Pasha, President of the Council, had already written to Emin in the far south, telling him that the Government had been obliged to "abandon" the Sudan, and that he must find his own way out as best he could. It only remained for the Egyptian Army to hold the frontier at Halfa and maintain whatever was left of Egyptian authority in the Eastern Sudan, i.e., to defend Suakin.

Elsewhere the Khalifa was now supreme and he proceeded to make plans for an attack on Egypt. He was only prevented from putting them into effect during the next three years by the situation in the east and west of the Sudan.

In the west there were serious revolts in Darfur during 1887, 1888 and 1889, and the Kababish tribe in Northern

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Kordofan were, until the death of their chief in April, 1887, continually harrying the flank of the Dervishes on the Nile.

In the east, not only was Osman Digna in difficulty with the local tribesmen, but—more important—the Abyssinians were threatening to attack in force. In June, 1887, they defeated the Dervishes near Gallabat, but they, in their turn were defeated two months later near Gondar. In July, 1888, again, the Abyssinians won a notable victory, and in February, 1889, they utterly defeated the Emir Zaki Tummal at Gallabat. In this latter engagement, however, the Negus John was killed, and in consequence the Abyssinian victory was converted into a rout. Their forces retired in disorder, and Menelik of Shoa succeeded to the throne.

On the southern border of Egypt, and on the Red Sea coast, during 1886, 1887 and the early part of 1888, little happened except sporadic skirmishing and occasional minor actions, such as the brilliant skirmish which took place at Sarra on the Egyptian front in April, 1887.

In December, 1888, Osman Digna laid siege to Suakin. Egyptian reinforcements and a small British force were at once sent from Cairo under Sir F. Grenfell, and Osman was heavily defeated.

In the summer of 1889 the Khalifa definitely took in hand the invasion of Egypt, and a powerful force under the great Emir Wad-el-Negumi advanced down the Nile. Wad-el-Negumi suffered a reverse at Argin on the frontier in July, and in August Colonel Grenfell, the Sirdar, having no time to wait for the British brigade which was being sent upstream to reinforce him, engaged the Dervish leader at Toski and practically annihilated his army. The danger to Egypt from the south was thus removed for some years.

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In 1890, 1891 and 1892 British and Egyptian troops were active in the Red Sea area, recaptured Tokar, Trinkitat and El Teb, drove back Osman Digna, reoccupied Tokar and robbed the Dervishes of all effective power in those districts.

During the same year the Shilluk and Nuer tribes on the upper White Nile rebelled against the Khalifa and disaffection was rife in most of the outlying districts.

In 1893 the Italians defeated the Dervishes at Agordat. In July, 1894, they took Kassala ; but two and a half years later, under the terms of the 1891 agreement they handed it over to the troops of the Egyptian Army commanded by Colonel Parsons.

On the Egyptian frontier Dervish raids recommenced in 1895. In 1896, partly for this reason, but largely in order to support the Italians, who had on the 1st March, 1896, been seriously defeated by the Abyssinians at Adowa and were now threatened by the Dervishes as well, it was decided to reoccupy Dongola. The Egyptian Army accordingly advanced, and by September the river was held as far south as Merowë. Abu Hamed was stormed in August, 1897, and Berber occupied in September.

In March, 1898, a British brigade of 101 officers and 3,357 men was sent up to reinforce the Egyptian Army. The strength of the latter at the time was four Egyptian battalions and six Sudanese battalions, in addition to cavalry, camel corps and artillery, or in all, 82 British officers, 332 Egyptian officers, 13 British N.C.O.'s and 9,781 other ranks.

The whole force advanced to the Atbara under the command of the Sirdar, Sir H. Kitchener, and the battle of the Atbara was fought and won on the 8th April.

During the spring and summer, preparations for the final advance on Khartoum were perfected, and a force of

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8,200 British troops and 17,600 officers and men of the Egyptian Army (Egyptians and Sudanese) advanced on Omdurman.

On the 2nd September the power of the Khalifa was broken for ever at Kerreri, a few miles north of Omdurman. The total Anglo-Egyptian casualties suffered here were 490, namely, fifty-six killed and 434 wounded. The British forces lost twenty-seven killed and 133 wounded ; the Egyptian forces lost fourteen killed and 152 wounded. The remaining casualties were among the Sudanese battalions of the Egyptian Army.

Marchand's expedition had meanwhile left Brazzaville in March, 1897, and followed in Liotard's footsteps. Within a year practically the whole of the Bahr-el-Ghazal had been subjugated, and on the 10th July, 1898, in spite of Dervish opposition, the French force reached Kodok (Fashoda).

The Sirdar at once hurried thither and met Marchand on the 19th September. He took the line that the presence at Fashoda and in the Nile Valley of a French party constituted a direct violation of the rights of Great Britain and Egypt, and after protracted negotiations between London and Paris the French withdrew in December.

They formally renounced their claims in the Nile Valley by a declaration signed at Paris on the 21st March, 1899, which defined the British and French spheres of influence.

On the 19th January, 1899, the status of the Sudan was defined by an agreement between the British Government, on the one hand, and the Government of the Khedive, on the other:—

AGREEMENT between HER BRITANNIC MAJESTY'S GOVERNMENT and the GOVERNMENT of HIS HIGHNESS THE KHEMIVE OF EGYPT relative to the future Administration of the Sudan.

Whereas certain provinces in the Sudan which were in rebellion against the authority of His Highness the Khedive have now been reconquered

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by the joint military and financial efforts of Her Britannic Majesty's Government and the Government of His Highness the Khedive ;

And whereas it has become necessary to decide upon a system for the administration of and for the making of laws for the said reconquered provinces, under which due allowance may be made for the backward and unsettled condition of large portions thereof, and for the varying requirements of different localities ;

And whereas it is desired to give effect to the claims which have accrued to Her Britannic Majesty's Government by the right of conquest, to share in the present settlement and future working and development of the said system of administration and legislation ;

And whereas it is conceived that for many purposes Wadi Halfa and Suakin may be most effectively administered in conjunction with the reconquered provinces to which they are respectively adjacent ;

Now it is hereby agreed and declared by and between the undersigned, duly authorized for that purpose, as follows :—

ART. I

The word " Sudan " in this agreement means all the territories south of the 22nd parallel of latitude, which :

(1) have never been evacuated by Egyptian troops since the year 1882 : or

(2) which having before the late rebellion in the Sudan been administered by the Government of His Highness the Khedive were temporarily lost to Egypt and have been reconquered by Her Majesty's Government and the Egyptian Government, acting in concert : or

(3) which may hereafter be reconquered by the two Governments acting in concert.

ART. II

The British and Egyptian flags shall be used together both on land and water, throughout the Sudan, except in the town of Suakin, in which locality the Egyptian flag alone shall be used.

ART. III

The supreme military and civil command in the Sudan shall be vested in one officer, termed the " Governor-General of the Sudan." He shall be appointed by Khedivial Decree on the recommendation of Her Britannic Majesty's Government, and shall be removed only by Khedivial Decree, with the consent of Her Britannic Majesty's Government.

ART. IV

Laws, as also Orders and Regulations with the full force of law, for the good government of the Sudan, and for regulating the holding disposal and devolution of property of every kind therein situate may from time to time be made altered or abrogated by Proclamation of the Governor-General. Such Laws, Orders and Regulations may apply to the whole

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or any named part of the Sudan, and may, either explicitly or by necessary implication, alter or abrogate any existing Law or Regulation.

All such Proclamations shall be forthwith notified to Her Britannic Majesty's Agent and Consul-General in Cairo, and to the President of the Council of Ministers of His Highness the Khedive.

ART. V

No Egyptian Law, Decree, Ministerial Arrêté, or other enactment hereafter to be made or promulgated shall apply to the Sudan or any part thereof, save in so far as the same shall be applied by Proclamation of the Governor-General in manner hereinbefore provided.

ART. VI

In the definition by Proclamation of the conditions under which Europeans, of whatever nationality, shall be at liberty to trade with or reside in the Sudan, or to hold property within its limits, no special privileges shall be accorded to the subjects of any one or more Power.

ART. VII

Import duties on entering the Sudan shall not be payable on goods coming from Egyptian territory. Such duties may however be levied on goods coming from elsewhere than Egyptian territory, but in the case of goods entering the Sudan at Suakin or any other port on the Red Sea littoral, they shall not exceed the corresponding duties for the time being leviable on goods entering Egypt from abroad. Duties may be levied on goods leaving the Sudan, at such rates as may from time to time be prescribed by Proclamation.

ART. VIII

The jurisdiction of the Mixed Tribunals shall not extend, nor be recognized for any purpose whatsoever, in any part of the Sudan, except in the town of Suakin.

ART. IX

Until, and save so far as it shall be otherwise determined by Proclamation, the Sudan, with the exception of the town of Suakin, shall be and remain under martial law.

ART. X

No Consuls, Vice-Consuls, or Consular Agents shall be accredited in respect of nor allowed to reside in the Sudan, without the previous consent of Her Britannic Majesty's Government.

ART. XI

The importation of slaves into the Sudan, as also their exportation, is absolutely prohibited. Provision shall be made by Proclamation for the enforcement of this Regulation.

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ART. XII

It is agreed between the two Governments that special attention shall be paid to the enforcement of the Brussels Act of the 2nd July, 1890, in respect of the import, sale, and manufacture of fire-arms and their munitions, and distilled or spirituous liquors.

Done in Cairo, the 19th January, 1899.

Signed { BOUTROS GHALI.
CROMER.

In order to obtain a fuller background to the modern history and politics of Egypt and the Sudan, the reader is referred to the following books :—

The River War Winston Churchill.

Fire and Sword in the Sudan Sir R. von Slatin.

Mahdism and Anglo-Egyptian Sudan Sir R. Wingate.

Modern Egypt Lord Cromer.

The Transit of Egypt Lt.-Col. P. G. Elgood.

The Opening Up of Africa Sir Harry Johnston.

(Home University Library.)

Survey of International Affairs, Vol. I, 1925 (and subsequent issues)—

Published by the Institute of International Affairs.

Gordon and the Sudan Bernard Allen.

The Anglo-Egyptian Sudan Sir Harold MacMichael.

Osman Digna H. C. Jackson.

“ Government in the East is less the making of constitutions than the establishment of personal relationships.”

MORISON.

PART II

ETHNOLOGICAL SURVEY

OF THE SUDAN

By E. E. EVANS-PRITCHARD.

(Late Professor of Sociology, Egyptian University, Cairo).

INTRODUCTION

THE Anglo-Egyptian Sudan is a political and not a distinct geographical or ethnological area. The Sudan (though the word is used in this paper as short for Anglo-Egyptian Sudan) is more inclusive than the Anglo-Egyptian Sudan since it stretches to the Atlantic Ocean. Moreover, the Anglo-Egyptian Sudan is not coterminous with the basin of the Nile, for this includes Western Abyssinia and Northern Uganda while some of the water-courses of Darfur form part of the Chad drainage system. It may be easily observed that the Anglo-Egyptian Sudan is not an ethnological unit since several peoples fall under two or three different administrations, e.g., the Azande of the Bahr-el-Ghazal come under the Anglo-Egyptian, Belgian, and French administrations, and the Anuak and Nuer of the Akobo and Baro rivers live partly in the Anglo-Egyptian Sudan and partly in Abyssinia.

Owing to variation in rainfall the vegetation belts, which so deeply affect human and animal life, run from W.S.W. to E.N.E. Following the classification by Drs. Hurst and

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Phillips, the most northern belt is desert where the only permanent vegetation is found near isolated wells and does not support inhabitants. To the south of the desert is shrub steppe, characterised by acacias, which produces abundant pasturage for camels and goats at certain times of the year owing to a regular, if scanty, rainfall. Nomad camel-owning Arabs, like the Kababish, flourish in this country. South of Khartoum we reach thorny savannah. The grasses are high and luxuriant during the rains and the country is dotted with small thorny trees. The rainfall is heavy enough to allow cultivation of maize and millet (*dura*). This belt is excellent for stock-breeding and also produces gum, the collection of which plays so large a part in the lives of the peoples of central Kordofan. Here live the Cattle-Arabs and the pastoral Shilluk. South of the thorny savannah is a belt of open savannah consisting of level, almost treeless plains, covered with high grasses, where live the pastoral Dinka and Nuer who occupy also the swamp (*sudd*) country which borders it. To the west and south of these grassy plains lies savannah forest in which trees are often numerous enough to form open forest though they do not grow beyond medium height and cast little shade. Cattle are bred in this country till 'fly' (*glossina*) on the ironstone plateau renders a pastoral life impossible. Savannah forest is typical of the Zande kingdoms of the southern Bahr-el-Ghazel. Tropical rain forest is only found in the Sudan in the form of 'fringing' forests along the banks of streams in the extreme south.

Two main racial types have contributed to the physical characters of the peoples of the Anglo-Egyptian Sudan, the Caucasian and the Negro, the White and the Black. No effort will be made to classify the inhabitants of the country into racial sub-divisions. Admixture has been

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going on for a very long time and anything approaching pure racial types is rare. Many so-called 'Arabs,' are definitely negroid in appearance, e.g., the Baqqara and the Islamic peoples of Darfur, while among the black-skinned peoples individuals displaying Caucasian features may occur, e.g., among the Shilluk. We must regard the peoples of the Sudan as variations between two ideal poles, the pure Caucasian and the pure Negro types. It is not usual to speak of the black-skinned peoples of the southern Sudan as Negroes but to refer to them as Negroids. Also we must refrain from speaking of 'Arab' in reference to racial characters. Even in Arabia the Arabs are not a racially homogeneous type. The word 'Arab' is here generally used in an historic sense only, to refer to those people who migrated from Arabia to the Sudan and their descendants, and the indigenous folk who were absorbed into the Arab tribes and adopted their culture. These Arabs brought with them a Semitic tongue and the religion of Islam and this combination I refer to as Arabic culture. I do not speak of Semitic and Hamitic races as there is danger of confusion when the same expressions serve to describe both race and language.

In the Anglo-Egyptian Sudan there are three main linguistic families, the Semitic, the Hamitic, and the Sudanic. A Semitic language, Arabic, is spoken over the greater part of the northern Sudan and, where writing is known, the Arabic script is used. A debased form of Arabic is also a *lingua franca* throughout the Southern Sudan. Another language belonging to the Semitic family, Tigre, is spoken by the Beni Amer. The only language in the Sudan usually considered to be truly Hamitic is *to bedawi* spoken by the Bisharin and Hadendoa, though Meinhof classes the language of the Negroid Bari in the same linguistic family. The vast majority of the

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Negroid peoples of the Southern Sudan speak either Sudanic languages or languages which display both Sudanic and Hamitic characters and are classed as Nilo-Hamitic. The Barabra dialects of the Nile valley are also usually considered by experts to be Sudanic though some authorities think they ought to be classed as Hamitic. They exhibit both Sudanic and Hamitic features. Bantu and the Bushmen group of languages, do not occur in the Anglo-Egyptian Sudan though a number of the languages of the southern Nuba Hills are classed as 'bantoid' by some writers. It must be pointed out, moreover, that numerous languages, especially in Kordofan, Darfur, and Darfung, are still scarcely known well enough to permit final classification.

From the ethnological point of view the Anglo-Egyptian Sudan falls into two divisions, the northern Sudan which is Arabic-speaking and Islamic and is therefore to a considerable extent culturally homogeneous, for Islam is a culture as well as a creed, and the southern Sudan which is culturally heterogeneous.

THE NORTHERN SUDAN

Although the Northern Sudan is now dominated by Arabic culture this is of recent introduction, for it is evident that the Arabs had very little success in transmitting their language and religion to the peoples they found there before the 16th century. In Ancient Egyptian times the western and eastern deserts were occupied by Caucasians, who were probably like the present-day Berbers and Beni Amer, and Ethiopia was inhabited by Negroid peoples who probably resembled the present-day inhabitants of the Nuba hills. The peoples of Nubia seem to have been of mixed Caucasian-Negro stocks. Egyptian

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culture spread, in a bastard form, into Nubia and Ethiopia perhaps as far as the Abyssinian Highlands. Both Nubia and Ethiopia were converted to Christianity during the 5th and 6th centuries A.D. In the 7th century the Arabs, after their conquest of Egypt, invaded Nubia, but it was not till the 12th, 13th and 14th centuries that the Nubians were converted to Islam. Arabs had also crossed over the Red Sea from Arabia to the Sudan and had contributed to the occupation of the Blue Nile region where the Arab immigrants rapidly mixed with the Negroid indigenes, whose descendants are known to us as Fung and Hameg. A Negroid dynasty, the Fung, arose at the end of the 15th century and having accepted Islam combined with their Arab neighbours to overthrow the Christian kingdom of Soba. This was the end of Christianity in the Sudan.

One naturally hears more of conquests and raids but it is likely that the spread of Arabic culture was equally due to peaceful penetration, inter-marriage, trade, and settlement. The Arab is not a fanatic and it was non-Arab peoples who had adopted his religion, like the Beja, or who were a product of Arab-Negro admixture, like the Baqqara, who showed the most obstinate fanaticism during the revolt of the Mahdi. Nor is he imbued with missionary zeal and the spread of Islam has been largely due to traders like the Danagla who are not Arabs at all.

Indeed the true Arabs have always been numerically insignificant in the Sudan. Everywhere they have inter-married with the indigenous population and even Arabs like the Kababish seem to have mixed freely with Caucasians speaking Hamitic languages and to a lesser extent with Negroids. Moreover, in spite of the wide influence of Arabic culture, a number of peoples who play a very important part in the political and social life of the Northern Sudan have maintained

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their own languages and to a minor degree customs which an orthodox Moslem would regard as superstitious. The Barabra of the Nile valley still speak their ancient dialects, and the Hadendoa, Bisharin and Beni Amer still speak their own Hamitic and Semitic tongues though all these peoples are Muslimin. In Darfur and Kordofan a number of indigenous languages still flourish, above all Fur, among Negroid peoples who profess Islam. It is likely, however, that many languages spoken by numerically weak peoples will not survive, and some have already disappeared: the breaking up of indigenous cultural units was greatly advanced by Egyptian and Mahdist rule.

Before passing to the Southern Sudan two ethnological controversies concerning the Northern Sudan may be lightly touched upon, the position of the so-called Nubian dialects, spoken in northern Kordofan, and the origin of the Fung.

Some of the languages spoken on hills in northern Kordofan were shown by Lepsius to resemble the Berberine dialects. Prof. Seligman considers that the resemblances are due to borrowing from Danagla who are known to have traded and settled in Kordofan over a very long period. Prof. Westermann finds this explanation unacceptable, and Dr. Zyhlarz believes that he has shown conclusively that the Berberine dialects and those spoken on the hills of northern Kordofan are separate branches of the same Nubian language. However, it would be unwise at present to express a final opinion.

It is remarkable that we do not know the racial and cultural origins of the aristocracy who ruled an empire lasting from the 15th century till Mohamed Ali's conquest of the Sudan, an empire which at its zenith incorporated Dongola and Kordofan. When we first obtain historical information about the Fung they ruled from

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Sennar, spoke Arabic and professed Islam. However it may be doubted whether Arabic was more than a *lingua franca* for the mixed population of Sennar and the surrounding country, and it is evident that only the better-class townsmen of Sennar were Muslimīn in more than name. These Fung rulers showed an admixture of Caucasian and negro blood and there are two theories of their origin, the first holding that they were of Arab (Beni Ommayya) ancestry who came to Sennar by way of Abyssinia, which is what the present-day descendants of the Fung like to believe, and the second, deriving from a statement by Bruce, but supported by other authorities, holding that they were of Shilluk ancestry but that they mixed with Arabs and adopted the externals of Arabic culture. Both theories are highly speculative. Everyone is agreed that the term 'Fung' is correctly applied to aristocracies at Sennar and other local centres in Dar Fung but cannot be used to refer to any particular racial type nor to any distinctive language and culture.

THE SOUTHERN SUDAN

It is extremely difficult at the present time to make a satisfactory classification of the cultures of the pagan Sudan. When several peoples speak a common language or related languages this common factor is used to define them as a cultural group irrespective of cultural differences which may otherwise exist between its members (as in divisions (A), (B), and (D)). All the sub-divisions (marked by numerals) in the list which follows are linguistic groups. When this common factor is lacking it is necessary, in defining the main ethnological divisions, to fall back upon a consensus of physical and cultural traits, or even to group together peoples merely because they live in the same area (as in divisions (C), (E), and (F)).

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(A) NILOTES

- (1) Shilluk.
- (2) *Shilluk-speaking* : Anuak, Acholi, Luo, Bor, Dembo, Shat, Manangeir, and Beri.
- (3) Dinka.
- (4) Nuer and Nuer-speaking Atwot.

(B) NILO-HAMITES

- (1) Bari.
- (2) *Bari-speaking* : Fajelu, Kuku, Mandari, Kakwa, Ligi, Nyefu, Shir, and Nyangwara.
- (3) *Lotuko-speaking* : Lotuko, Lokoiya, Lango, Dongotono, Lokathan, Lowama, and a section of the inhabitants of Mount Lufit.
- (4) *Didinga-speaking* : Didinga, Longarim, and Beir.
- (5) *Turkana-speaking* : Turkana, Dodoth, and Topotha.

(C) TRIBES OF THE IRONSTONE PLATEAU

- (1) *Bongo-Mittu group* : Bongo, Mittu, Baka, Beli, Sofi, Gberi, Lōri, Moro Kodo, Nyamusa, Biti, and Wira.
- (2) *Ndogo group* : Ndogo, Bviri, Sere, and Bai.
- (3) *Moro-Madi group* : Moro (Miza, Endri, Kediru, Öggi), Madi, Kaliko, Abukaya, Logo, and Lendu.
- (4) Gbaya.
- (5) Golo.
- (6) Mundu.
- (7) Babuckur.

(D) AZANDE

(E) KORDOFAN, classified by P. A. and D. N. MacDiarmid into the following ten language groups :

- (1) *Kawalib* :—Delami, Um Berumbeita, Tendik, Kawalib, Nukr (Nyukur), Aleria, Heiban, Abol, Otor (Kawarma), Shwai, Um Heitan, Tira el Akhdar, Kinderma, Tira Lumon (in Moro Hills), Moro, Lebu, Umdorein, Lukha, Fungor, Kau, Nyaro, Werna.
- (2) *Tagali* :—Rashad, Tagali, Kajaja, Tagoi, Turjuk, Tumeli, Wadelka, Moreb, Tukum.
- (3) *Talodi-Mesakin* :—Elira (southern end of range), Talodi (Talodi, Tasomi, Tata), Buram, Mesakin (Jebel Dagig), Tacho, Acheron, Torona, Luman (four small communities in the Moro Hills), El Abeima, Daloka.
- (4) *Lafafa* :—Eliri (Lafafa), El Amira.

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- (5) *Talodi-Kadugli* :—Eliri (northern end of range), Karondi, Talodi (Tumtum), Krongo, Tabanya, Fama, Teis, Krongo Abdulla, Kanga, Miri, Kadugli, Murta, Keiga el Kheil, Demik, Kadodo, Keiga Luban, Keiga Tummero, and the Nuba of Dar el Kabira, Kamdang and Tuleshi.
- (6) *Dagu* :—Dagu Hills (Dar el Kabira, etc.). Shat Damam, Shat Safia, Shat Teleldia, Liguri, Saburi, Talo north-east of Kadugli, parts of the Abu Sinoon and Abu Hassim.
- (7) *Temein* :—Teis um Danab (north of Kadugli), Keiga Girru, Temein.
- (8) *Katla* :—Katla, Gulud, Tima.
- (9) *Nyimang* :—Nyimang, Mandal Jebels (except a section of Sobai), Afitti-Dair (Sidra).
- (10) *Hill-Nubian* :—Dilling, Gulfan, Debri, Nyetto, Moron, Turon, Shilma, Kabila, Wali Kuron, Wali Baboi, Abu Seida, Kunit, Fanda, Dulman, Kasha, Shifr, Abu Genuk, Tabbag, Kubja, Shanshan, Boska, Serga, Bobai, Abu Garein, Kadaru, Dabatna, Koldegi, Kortala, Kafeir, Dair (except Sidra).

(F) DARFUNG, the main language groups being :

- (1) *Gule Language* : Gule, San, and Roro.
- (2) *Ingassana Language* : Tabi Hills, Agadi, Bagis, Kilgu, Buk, Sidak, Bulmut, Mugum, and Kukuli.
- (3) *Berta group* : (a) dialects spoken along both sides of the Abyssinian border from the River Yabus to Roseires and (b) Sillok group of dialects spoken on hills Sillok, Yakan, Malkan, Deheima, Kele, Tornasi.
- (4) *Uduk Language* :
- (5) *Burun group* : (a) northern dialects spoken on hills Maiak, Surkum, Jerok, Mufwa, Kurmuk, Kudul, Ragreig, Abuldugu, Mughaja, and Tullok and (b) southern dialects spoken by dwellers on hills Ulu and Gerawi, by the Jumjum at hills Tunya, Terta, Wadega, and along Khor Jumjum.
- (6) *Khoma groups* ?

In the space at my command only a few general remarks can be made about the numerically and politically more important peoples of the pagan Sudan, the Shilluk, the Dinka, the Nuer, the Bari, and the Azande. The numerical strength of these peoples can be only approximately estimated.

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The Nilotes are tall, long-headed, long-legged, spindle-shanked, and dark-skinned. They are extremely conservative, proud, reserved, of serious mien, and unsociable with strangers. They despise clothing and scorn Arabic and European cultures. Their open contempt for foreigners makes it difficult to establish contact with them. Missionaries have found them very unimpressionable, and even to-day their attitude towards the government may be described as distinctly free and easy. They are both pastoral and agricultural but their interests are mainly centred in their cattle, and they spend about half the year away from their villages, dwelling in camps wherever water and pasturage are abundant. They live on terms of great intimacy with their cattle, which they seldom slaughter. Not only do the cattle provide them with milk and furnish them with fuel, sleeping-skins, and other useful objects, but they also give them the wherewithal to marry and are the medium through which they maintain relations with the spirits and with the ghosts of their ancestors.

The Shilluk (100,000) have a centralised political system under a monarch who, in the old days, used to be killed if he showed loss of vitality, as it was thought that the health of the king was bound up with the welfare of his people and their herds. We know very little about the peoples who speak dialects of Shilluk, but it is known that these dialects all resemble one another more than any one of them resembles Shilluk. They are all predominantly agricultural and several have been deeply influenced by their neighbours. The only member of this group known to have a political system resembling that of the Shilluk, is the Anuak people of the Pibor river (40,000). Prof. Seligman thinks that the original homeland of these peoples may have been to the east of Lake

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Victoria, and Prof. Westermann is of the opinion that the Shilluk may have reached their present country about the end of the 15th century.

The Dinka (at least 500,000) do not form a single political unit like the Shilluk but are divided up into a number of independent tribes which are, in the main, culturally homogeneous. The man who exercises most authority in each tribe is the hereditary rain-maker who used to be buried alive when he reached old age. How long the Dinka have lived in their present country is unknown, but some authorities think that they originally came from the neighbourhood of the Great Lakes.

The Nuer (more than 300,000) may be considered an offshoot of the Dinka, for their physical characters, languages, and customs, are very similar. Like the Dinka they are divided into a number of independent tribes which are loose political units, since the various sections of a tribe are often at war with one another. Authority is exercised by persons with hereditary religious, rather than political, powers and during the last half-century prophets claiming divine authority have gained wide recognition. During the 19th Century the Nuer crossed the Nile from their home on the West Bank and ousted or absorbed most of the Dinka to the East of the Nile. They settled in the territory they had conquered.

Physically, the Bari (30,000) resemble the Dinka, but their language is far more Hamitic in type than Nilotic, and their culture is very different from Nilotic culture. It seems likely that the Bari-speaking peoples (87,000) are akin to the peoples of the Bahr-el-Ghazal but have been subjugated by the Bari, whose language and customs they have adopted. At one time the Bari were far more numerous than they are to-day, and were probably as pastoral as the Nuer and Dinka. They appear to be in a

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state of transition from pastoral to agricultural modes of life as a result of having lost most of their cattle. Their political system is still obscure but it is certain that rain-makers have great prestige and that there are class divisions of social importance. Though the original homeland of the Bari is unknown it is fairly certain that they crossed the Nile coming from an easterly direction.

The peoples of the ironstone plateau offer a sharp contrast to the Nilotes and Nilo-Hamites in physical appearance, in temperament, and in culture. The Azande are the best-known of these peoples and will serve for example. They are medium headed, of medium stature, with a skin that may be described as copper-coloured. They are a cheerful happy-go-lucky people, always joking and laughing, and are sociable and informative. They have shown themselves easily adaptable to changing conditions of life. They welcome trade goods and the opportunities that now arise for making a little money by selling their labour. They possess no cattle. Their staple crop is eleusine but they also cultivate maize, groundnuts, manioc, bananas, and a number of leguminous and oil-bearing plants. They are also keen hunters and collectors of termites and have a reputation as potters, wood-carvers and weavers.

The Azande (200,000 in the Sudan) at one time lived, according to their traditions, along the Mbomu river in French Equatorial Africa. From there they moved south-eastwards towards the Uele river, and afterwards in a northerly direction into the Sudan, which they entered about the beginning of the 19th century. Here they founded three large kingdoms and conquered enormous stretches of territory. Political authority is in the hands of a class of nobles who are of hereditary status, and no son of a commoner can ever attain noble rank.

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To what extent have the negroid peoples of the Sudan been subjected to foreign racial and cultural influences ? It is doubtful whether any peoples in the Sudan can be regarded as true Negroes, and their non-negroid characters, their pastoral pursuits, and to a certain degree the structure of their languages, are attributed to 'Hamitic' admixture and influence. Waves of Hamites (Caucasians speaking Hamitic languages) are supposed to have passed from Asia into Africa in very remote times and to have conquered and mixed with the Negroes. This mixed population was then driven further inland by fresh hordes of Hamites. Both the Nilotes and the Nilo-Hamites are said to be Hamiticised Negroes. Philologists appear to be agreed that the Hamitic languages are genetically related and not merely similar in type, so that there must have been some kind of contact between the Caucasian and the Negroid peoples who speak them, and if there was cultural contact there was probably racial admixture as well. Most authorities, foremost among them Prof. Seligman, are of the opinion that the Negroid peoples of the Sudan display evidences of Hamitic culture other than in their languages. It must be admitted, however, that we know very little about the social life, as distinct from material culture, of the pre-dynastic and proto-dynastic Egyptians and of the peoples of the Eastern Desert before they accepted Islam ; we cannot deduce Hamitic culture from the customs of peoples like the Nilotes and then use this culture as a means of proving that these peoples have been subject to Hamitic influence. It does not appear to be known to what degree the culture of the pagan Galla resembles the cultures of the "Hamiticised Negroes." On the whole we may say that the Hamitic theory provides a useful working hypothesis.

In view of the large claims made for the diffusion of

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Egyptian culture all over the globe it is peculiar that the evidence for its influence among the Negroid peoples of the Sudan is so slight. Nevertheless, Prof. Seligman is of the opinion that Egyptian influence is discernable in the practice of the Nuer and Dinka of artificially training the horns of bullocks, in the use of a peculiar type of harp among the Azande, in what he considers to be pseudo-mummification among the Lotuko, and in the identification of the Deity with the sun among the Ingassana and Burun peoples of Dar Fung.

The influence of Arabic-speaking peoples on the negroid communities of the Southern Sudan has been disastrous, owing to the conditions under which contacts were made. Slave dealers, generally called "Turks" or "Nubians" (they were largely Danagla), raided the south for slaves and ivory for nearly three-quarters of a century, and it was not until the reconquest by Anglo-Egyptian forces that their influence ceased.

Adventurers founded stations among the negroid peoples, and from these they raided the surrounding country in ever-widening circles of destruction. Their victims were helpless against fire-arms. Captives were either sold as slaves or compelled to live near the stations as serfs. The well-organized Zande kingdoms were usually left in peace; while the Shilluk state firmly resisted the Mahdist forces. The Nuer and inland Dinka tribes, partly owing to the difficulties their country offers to an invader, and partly, no doubt, on account of their warlike qualities, escaped constant pillage and tyranny. The Nuba of southern Kordofan held out in their hill fastnesses against every effort to subdue them, and, in spite of heavy losses, maintained their freedom. The Ingassana of the Tabi Hills were also unconquered.

But even such powerful communities as those of the

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Bari were decimated, while many tribes in the Bahr el Ghazal, such as the Mittu so admired by Schweinfurth, were practically exterminated and their culture almost entirely destroyed. The hill dwellers in Dar Fung likewise never recovered from the *Mahdia*, the final phase of this period of brigandage.

During the present administration Arabic culture has spread slowly, but surely, through the medium of political officers and traders.

THE TWO SUDANS: SOME ASPECTS OF THE SOUTH

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FROM Khartoum to Kampala or Stanleyville is an immense distance in space and even greater in imagination. From the North it is difficult, unless one has actually seen it, to realise the existence of another Sudan whose problems have far more in common with those of Uganda or the Belgian Congo than those of the Gezira or Kordofan. Latitude 12 North is laid down in the Pension Ordinance as the dividing line south of which additional service is earned towards pension. But this line has more than a climatic significance; for in effect it is the line which divides those two distinct entities, the northern and the southern Sudans.

At first sight the north might appear so varied as to preclude its conception as a single whole. By the native of the Red Sea, Khartoum is still spoken of as a foreign country, much as the Cornishman speaks of "England." The wastes of the Atbai, the sagias of Dongola and Berber, the Gezira cotton fields, the streets and markets of Omdurman, the pastures of the Baggara, have all produced their particular modes of life. The traditional cleavage between the desert and town is still heard in the contempt with which the sedentary speaks of the "Arab." The Hamites of the Red Sea, the Nubians of Halfa, the underlying strains of "Hameg" and "Anag," all add to the diversity of the picture.

But these varieties are mainly superficial. A common

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basis of Arabic race and language, and Islam, with their resulting unity of social and political ideas have fused the northern Sudan into a single whole. The District Commissioner who is transferred from Berber to Bara, from Kassala to Kordofan finds that he is dealing, in different local conditions, with the same kind of people, the same mental outlook. Once he has accustomed himself to the difference caused by a varying mode of life he knows what to expect.

Moreover, the culture of the north is one which is easily comprehensible to ourselves. Islam can claim in some measure to be a development of Christianity and the Koran has borrowed largely from the Old Testament and the New. One can read of the theological disputes of the Ash'arites and Mu'tazilites with no more feeling of nightmare than is induced by an account of the Arian or Nestorian controversies. The broad divisions of Sunni and Shia have their analogy in the two great divisions of Christendom. Most of the popular superstition is easily paralleled in Europe where the evil eye is still a commonplace and the vampire and were-wolf hardly dead. The political organisation of the tribe and its sections under the Nazir and his subordinate sheikhs is to us a normal and logical one, similar to that under which our ancestors may well have lived. Moreover, the Arab mentality is not so far removed from our own ; we continually find things which surprise us, but seldom things which shock us. His general ideas of right and wrong are broadly similar to our own.

Though geographically in Africa, the northern Sudan might almost be regarded as culturally a part of Asia. The people have a large measure of Asiatic blood, speak an Asiatic tongue and adhere to a Semitic creed, and make contact with the modern world through the literature

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and the press of Egypt, Syria and Iraq. An Englishman trained in Baghdad or Damascus would soon feel himself at home in Khartoum. The negro is a familiar type in the north but he is Islamised, Arabicised, and it is not until Jebelein is passed that you enter Africa.

It needs some effort to realise that it is well under a hundred years since the white man penetrated to the southern provinces. Ismail Pasha's conquest of the Sudan was in 1820. The progress of the Egyptian Government up the Nile was slow and in 1865 its influence did not extend far south of the Mudiria at Fashoda. Nero's centurions are believed to have penetrated as far as the *sudd*, if not beyond, in A.D. 66. The next Europeans to follow them, at an interval of nearly eighteen hundred years, appear to have been those of the expedition sent out by the Khedive Muhammad Ali to discover the sources of the Nile. This was commanded by Suleiman Kashef, a Turk ; the fleet was in charge of Selim Capitan, a Cretan or a Russian, and with them were three French engineers, Thibault, Arnaud, and Sabatier, and Werne as a private observer. Late in 1840 they reached the country of the Bari and interviewed Logono their chief. Logono, alone of all his people was dressed, somewhat surprisingly, in a long blue shirt which like the copper bangles which were much in evidence had come from the Berri country to the east. He was accompanied by an immense number of naked red-ochred warriors, tremendously tall with great ivory bracelets on each arm and masses of iron rings on every limb. On approaching the mountains the expedition found that the river became impassable owing to rocks and sandbanks, no doubt the Bedden rapids, and on January 26th, 1841, were obliged to turn back.*

* See Werne : *Expedition to discover the Sources of the White Nile* : also Thibault in the *Bulletin de la Societe de Geographie, Dme Serie*, tome xvi, pp. 127-132. I am indebted for this reference to Mr. G. O. Whitehead.

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On the Bahr el Jebel the next comer seems to have been Knoblecher, the pioneer missionary, who arrived at Gondokoro in 1849. He was soon joined by a few others, but ill-health drove them back to Santa Croce, the modern Kenisa, and then compelled the abandonment of their work until after the reconquest.

The southern territories were thrown open to the traders of whom Zubeir Pasha is the archetype. Ivory and slaves were the objects of their quests and the favourite method of acquiring the latter was by forming an alliance with the riverain tribes to raid their neighbours.

The Bahr el Ghazal seems to have been opened up first. According to Junker the first Khartoum vessel to exploit the upper Bahr el Ghazal belonged to a native ivory trader named Habashi. He was soon followed by Europeans, the Sardinian Vice-Consul Brun Rollet, the brothers Poncet and Petherick.

A remarkable journey was that of Miss Tinné, a Dutch lady who, in 1861, accompanied by her mother and sister, reached Gondokoro. A much larger expedition under her auspices to the Bahr el Ghazal in 1863, accompanied by several scientists, was disastrous. The whole party went down with fever. Mrs. Tinné and Dr. Stendner died, and the expedition was forced to return to Khartoum. Miss Tinné was subsequently murdered by Berbers in Fezzan, in 1869.

In 1862 Baker made his first journey, forced the difficult passage of the sudd and came to the traders' headquarters at Gondokoro. Here he met the Pethericks, Speke and Grant, and eventually made his way south to the discovery of Lake Albert.

As a result of his testimony the scandal of the slave-trade could no longer be overlooked, and in 1869 he was commissioned by the Khedive Ismail to annex the south

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and put down the trade. He found all the higher officials in active participation and his permanent success in this direction was slight. But in 1870 he reached Gondokoro, formally annexed the Equatorial Province to Egypt and passed on to and annexed Uganda.

In the Bahr el Ghazal, Zubeir, who had begun life as an insignificant Dongolawi trader, had carved out for himself a kingdom and passed on to the conquest of Darfur, leaving his son, Suleiman, as his regent. A clash with the government authorities became inevitable : after overcoming the most formidable difficulties, Gessi defeated Suleiman and killed him, and the Bahr el Ghazal Province became part of the Governor-Generalship of the south. On the White Nile Gordon succeeded Baker but remained only three years, much of which was devoted to the desperate task of getting his vessels through the Nile rapids for communication with Lake Albert. Gordon handed over to Emin, by which time Schweinfurth and Junker had crossed the Nile-Congo divide and explored the Zande and Mangbettu country.

Then came the Mahdia, which from Darfur flooded into the Bahr el Ghazal and compelled Lupton to surrender. The Dervishes no doubt found ready adherents in the Dongolawi traders in every station. Pressing eastwards towards the Nile the Emir Karamallah called on Emin to surrender. There was a brief respite but ere long Emin had to retreat southwards towards Uganda whence Stanley eventually extricated him. His garrisons held out for a little while, but in 1888 Osman Saleh captured Rejaf and Dervish domination was complete.

Between the régimes of the slave-traders and the Dervishes, the wretched inhabitants can have seen little to choose. At Gondokoro the old men can still remember the women and children packed into the barges for their

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journey north, and recall how the Arab, Abu Sa'ud, flogged a chief to death for failing to provide sufficient children for the trade. Not only was the country depopulated, but the extirpation of the cattle in some parts was so thorough that it lasts until to-day, many tribes who formerly had large herds being left with hardly a single head, while the consequent growing up of the bush and enlargement of the tse-tse areas makes restocking almost impossible.

Their one positive, though incidental, achievement was the stopping of the north-easterly expansion of the Zande. That warlike and well-organised nation had been eating up tribe after tribe and without the advent of the "Turks" might well have penetrated to the sudd.

Meanwhile another factor had appeared upon the scene. The scramble for "Africa" had begun and in about 1882 the International Association of the Congo, soon to become the Congo Free State, had been founded, "for the purpose of promoting civilisation and commerce of Africa and for other humane and benevolent purposes." Its blue flag with the golden star was soon pressing northwards, and by about 1890 the Belgians were in conflict with the Dervishes under Arabi Dafa'allah. In 1896 Chaltin stormed Rejaf and the Belgian power was established in what came to be known as the Lado Enclave. In 1898 Marchand, who had his headquarters at Fort Desaix, the modern Wau, made his marvellous journey through the Nile swamps to Fashoda. An expedition under Clochette and Bonchamps was to have co-operated with him via Abyssinia and the Sobat, but all perished. Then came the reconquest of the Sudan and the gradual extension of settled government. King Leopold died in 1910 and the Lado Enclave reverted to the Sudan. Uganda had been pressing northwards during the Mahdia, and her furthest

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post was at Gondokoro. In 1913 an Order in Council revised the frontier and the Sudan assumed its present form.

Thus, in the fifty years from 1860 to 1910, the inhabitants of the Upper Nile Valley took an unwilling and always painful part in the making of more history than they had experienced in the previous five thousand. Small wonder if they conceived an apprehension of foreign intruders and a conviction of their impermanence.

Jebelein once passed there is a complete change of scene ; everything is different, landscape, climate, flora and fauna, and most of all the inhabitants. In place of the white robes of the north we get our first glimpse of the elaborate coiffure of the Shilluk or the ash-smeared Dinka. This is the true Sudan, the "land of the blacks."

The change of race is complete ; for all their variety, the races of the south are essentially negroid, not the Arabised negroid of the north but the negroid comparatively untouched, living his own life in his own natural conditions. There is the difference of material culture between the sophisticated Arab and the primitive savage, naked and unashamed, so primitive in some cases that in him we can visualise the early ancestors of mankind. Above all there is the difference of religious and mental make-up, of attitude to existence, so great that contact becomes difficult. The history of magic in Europe seems to show that it may not be necessary to postulate for the negro a different type of mentality, to regard him as the typical introvert, modelling the external world to conform to his own spiritual emotions. But for him our laws of cause and effect have little existence or meaning. He lives in no ordered universe but in a tiny portion of a dimly realised earth capriciously interfered with by a spirit world that can be partially controlled by magic. In anything abnormal, anything strange, he realises the

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workings of that world. If, for instance, a young man dies suddenly in his prime, it is certainly magic and probably murder and it is his duty to seek out the slayer.

Equally difficult of comprehension are his social and political ideas. Even for people with an intimate knowledge of his language it is often difficult to discover how to say "What is his tribe?" He recognises other tribes as different, intermarries with some, raids others, but so he does with other sections of his own tribe. He seems to have no idea of the tribe-as-a-whole, of tribal loyalty. As a result the idea of a paramount chief is foreign to him; even the conception of a sectional chief is vague and his functions are often rainmaking rather than administrative. This lack of political cohesion seems to be general throughout Africa and the exceptions, the Shilluk, Zande, Zulu, have generally, as a result become conquering races. It is extraordinarily baffling to us. We instinctively expect to find some recognisable scheme of tribal organisation and are puzzled by its absence. The Greeks organised themselves in tiny states and their lack of racial cohesion destroyed Greece; but they had intense loyalty to their City. The African seems to have little political loyalty to anything.

His social system contains divisions unknown to the north. First of all he will be a member of his clan. Whatever the origin of these—they may once have been compact corporate sub-divisions of the tribe—they have now become diffused, have lost territorial significance and, though there may still exist obligations of hospitality between fellow clansmen, the idea of the corporate entity of the clan has disappeared and it mainly serves the function of a most complicated table of affinity. Not only can no man marry a girl of his own clan but he cannot generally marry into that of his mother and in many cases

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the clans of all his grandparents are forbidden to him. Sometimes the clan has associated with it some animal, the flesh of which may not be eaten ; occasionally, but rarely in the Sudan, the clansman's soul is believed to pass into that animal after death.

In many tribes the members will belong to an age grade. Of these there are typically four, children, youths, warriors, elders. Initiation is almost universally obligatory before entry into the warrior grade and takes the form of knocking out some of the lower teeth and of scarification, which, as amongst the Nuer, may be exceptionally severe. The elders, rather than the chief, were generally the main tribal authority ; the point has been little studied but it seems likely that in many tribes not everybody became an elder but that possession of exceptional wisdom, character, oratory, or wealth was necessary and that co-option, formal or tacit, by the body of the elders was required. In many tribes there are grades and initiation for women as well as men. Circumcision, whether male or female, though common in the Bantu group, is exceptional in the pagan Sudan.

Many tribes maintain the system of age-classes. This is a fighting organisation, the classes being formed after initiation at intervals of about four years, four classes forming the normal fighting force. In battle the senior grade might form the centre with the next two on either wing and the junior grade in support. Each class has its own name, often its own ornaments and insignia ; there is a strong bond of loyalty, mutual co-operation and hospitality between the members of a grade.

Especially now that inter-tribal war is frowned on the elders may find the young men a turbulent lot, hard to control. Unlike the youths and the elders they have lost the *raison d'être* of their status.

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African historical memory is surprisingly short. Many of us, in connection with the Homeric controversy were taught that primitive and illiterate peoples are capable of handing down long and complicated histories through many generations. But the African chief who knows the names of his ancestors for ten generations is exceptional, and generally then they know little else but names.

Within the uniformity of colour there is the widest diversity. Hamites from the east have blended with the true African and the result is a multiplicity of tribes and languages.

Eight or nine tongues are spoken in the southern part of the Fung Province ; a dozen are current in Mongalla. There are probably a hundred languages and dialects spoken in the Sudan to-day. Customs, beliefs, material culture, vary from tribe to tribe. Some can scarcely ever eat meat ; for others the normal diet is a mixture of blood and milk. The Zande a generation ago were practising cannibalism. There is the widest range of temperament, from the somewhat sullen aloofness of the Latuka and Shilluk (this is a trait of the Masai and seems generally associated with Hamitic blood) to the vivacious imitateness of the Acholi. The Dinka seems to have a particular capacity for nursing a grievance.

From the foregoing some of the special problems of the south will begin to appear. First and foremost, is that of education, in its widest sense. We can faintly picture the bewilderment of palæolithic man if he had suddenly found himself in the streets of ancient Babylon or Thebes. But we take ourselves and our civilisation so much for granted that it is with difficulty that we can realise that the impact of our civilisation on the African must produce a bewilderment almost as great. Our ideas are no less strange to him than our machines, the mental gap is

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enormous. To enable him to assimilate and benefit by our civilisation without "dislocation of soul," in Professor Julian Huxley's phrase, without destroying his own native institutions and the anchorage on life which they give him is the task of African education. In the Southern Sudan this has been entrusted, for the time being, to the missions. It follows that since they are both, in their different capacities, engaged in the same task, there should be close liaison between the missionary and the administrator.

It may be observed, in parenthesis, that what may be called the "glass-case" theory still obtains currency. It laments the increasing sophistication of the African, his growing tendency to put on the clothes and the other trappings of civilisation. It would have him remain the magnificent and primitive savage, roaming naked and untrammelled in his native wilds. It is understandable enough, but it will not work. As a result of Roman civilisation woad went out of fashion in Britain, and it will hardly be argued that it would have been better for us to have stuck to woad and all that it implied. The application is the same. The mere fact of our presence makes it impossible for the African to remain stationary. If there were not a single native school in Africa he would nevertheless covet clothes and petrol tins. We must accept the situation which we have created ; the best we can do is to make the change as little painful, as little productive of misfits, as may be.

Allied to the educational is the language problem ; no progress is possible as long as this multiplicity of tongues makes intercourse impossible. There must be some *lingua franca*, as Swahili has become the universal language of central East Africa. A certain knowledge of Arabic pervades the south, but it is the veriest smattering, generally of the most barbaric type. It is out of the

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question for nine chiefs out of ten to express themselves in Arabic on any deep-felt matter. English is the language of higher education as the local vernacular is of the lower.

It is to education more than to any repressive action on our part that we must look for the eradication of witchcraft, which is universal, a commonplace of native life and leads to more homicides than any other cause. A woman hails a passing lad and asks him to bring her back a grindstone which she has lent to a neighbour. He does so, is next day taken ill and dies. There is no doubt in anybody's mind, probably not in hers, that she has killed him, even though unwittingly, and she must pay compensation. A man sees another walking round his sheepfold and taking a lizard from a tree and placing it near the pen. A week or two later one of his children and some of his animals die ; and he accuses him of magic and murder to the native court. The court, mindful perhaps of our attitude to these things, decides that there is no cause of complaint. He broods on his grievance for a month or two and then one morning goes out, finds his man asleep and smashes his skull in with his axe. If it were confined to the professional anti-social sorcerer who makes use of his powers for extortion and terrorisation the thing would be simpler ; he is not popular, in the old days was frequently killed and there are sections of the Penal Code which fit his case. But quite ordinary people, particularly lonely old women, are constantly coming under suspicion ; and it is noteworthy that persons accused of witchcraft nearly always admit it. In a different category is the spirit doctor. He has a definitely social, sometimes semi-official position, whose business it is to cure bodily and spiritual ills. He is equivalent to the general practitioner at home. If it were not that he is on occasion required to smell out some unknown author

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of misfortune there would be little against him. As it is he does more good than harm. His suppression would be like closing down Harley Street and lay us open to the charge of leaving the anti-social, malignant wizard to work his will unchecked.

Even those who regret that the theological differences and dogmas which have racked Europe are now being transplanted to Africa must find it impossible to see any well-run Mission station without realising the excellence of the work that is being done. The noble savage of fiction, apart from his magnificent physique, is hard to parallel in fact. Recent researches in East Africa have shown that he does not even know how to feed himself, that his diet is generally so unbalanced as to be prejudicial. Contrasted with the normal squalor of his existence, the cleanliness and order of a good Mission cannot fail to make an effect. The native attitude to Missions and what they teach is often appreciative and there seems little unreadiness to accept the new doctrines. If it were not for the insistence on monogamy Christianity would spread rapidly, but here there is a conflict with the social and economic structure. Many tribes practise the levirate by which on a man's death his wives are taken over by his sons or brothers. One result of this institution is that the problem of old and homeless women with no one to look after them is avoided. Amongst the agricultural tribes a man's potential wealth seems to depend largely on the number of his wives, which dooms the monogamist to poverty. As a result, secessionist Churches have sprung up in Kenya and elsewhere, which, while endeavouring in everything else to conform with the Christianity they have imbibed claim in this one respect the authority of the Old Testament, a situation which at a later date may well arise in the Sudan. There is generally a preponderance

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of women though in many places not a great one. In Mongalla it appears to be about ten per cent.

That modification of ideas should come about more slowly in the religious than in the secular sphere is inevitable, but in the attitude to native institutions and beliefs this may lead to divergence between Missions and Administrations. On the administrative side there has been throughout Africa a complete revolution of ideas since the War, a revolution epitomised by the phrase "Native Administration," the basic idea of which is that western civilisation in all its forms is not necessarily good for the African, and that it is the duty of the trustee nations to preserve, adapting if necessary, as much as possible of native institutions and culture, that what is wanted is not an imitation European but a better African. In the Mission sphere while the old idea that all "heathen" customs are necessarily pernicious has been greatly modified, and while there are definite signs that the extent to which native beliefs and customs, such as initiation and ancestor worship, can be tolerated, is receiving attention, there is a much greater "lag" than in secular ideas. It is clear that a chief's son who has received a Mission education may find himself, on succeeding his father, in a position of painfully conflicting loyalties if he is expected, *qua* chief, to practise observances which the Missions condemn.

In some cases there may be misconceptions on the missionary part as to the objects of indirect rule, which may be regarded as aimed at stereotyping existing institutions to the exclusion of future progress.

Native administration presents problems quite unknown in the north. The accepted object of indirect rule, is to build up the structure on existing native institutions. But where those institutions are so tenuous, and the

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political ideas so different that we can hardly grasp them, it is difficult to know how to begin. In Mongalla, for example, there are some twenty-five tribes. There are about seventy paid chiefs—their salaries are generally microscopic—and some hundred and fifty chiefs altogether, many with less than two hundred taxpayers. It is clear that though some kind of judicial system can be evolved, no real progress towards native administration can be made in these conditions. Everything else apart, it would be too expensive. Much may be done by more or less voluntary amalgamations ; personal ambitions and jealousies eventually make difficult further reductions in this way. In Tanganyika a solution is being attempted by tribal federations ; in their own particular areas the chiefs retain their independent powers, but act together as a Native Authority. As a deliberative body for the allocation of native administration funds and for the formulation of local regulations such a system has obvious possibilities, but one feels that there must be a need for a co-ordinating executive which in such a case can only be exercised by the District Commissioner, which violates the principle. A solution may have been found in practice, but it is hard to see what it can be. An alternative might be to set up a centripetal tendency by subsidising selected chiefs with increased pay and privileges. In time they might come to be regarded as paramount. Or one might frankly appoint a selected chief as the tribal paramount and resolutely support his authority. If he had hereditary standing he might be successful in time, but only at the price of great discontent and constant intrigue. In any case the process must be a long one and a combination of the first and second alternatives is probably most likely to be productive. The appointment of a Government creature who has no hereditary standing will in nineteen

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cases out of twenty be a failure. Incidentally it has in the past been not unknown for a tribe or section who have been asked to select a chief to put forward some complete nonentity as a scapegoat to bear governmental wrath, the real holder of the office who is recognised as such by everyone remaining in discreet obscurity in the background.

The greatest difficulty in developing native judicial institutions is to find out what those institutions were. A beginning was made in Mongalla Province several years ago by the creation of Chiefs' Courts on the Uganda model. There were generally three or four such courts for each district, composed of some six to twelve of the leading chiefs. They have done excellent work, not only in disposing of native cases but also as a training ground for chiefs. But, though they are not necessarily any the worse for that, enquiry shows that they are not regarded by the people as "native" courts at all, but as purely Government institutions. Experiments with individual chiefs' courts following native procedure prove very interesting. Procedure varies greatly from tribe to tribe. In some cases decisions are taken by the elders ; in others by the whole audience, all of whom have the right of speech ; the chief acts as a kind of chairman and the proceedings are most orderly. In others cases are decided by the sub-chiefs, who inform the chief of their decisions for his approval. The only thing which they have in common is that the chiefs' personal judicial powers seem to be very limited. There are a few tribes, who happen to have suffered much from the various foreign invasions, and who may be influenced by the absolutist example of the Avungara, whose chiefs claim that in the old days justice was meted out by them alone, unaided by elders or people. But it is most unlikely that these claims are

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correct. In most cases African justice seems to be essentially democratic.

The problem of economic development is probably the major question of all, for it is arguable that any educational or political progress must be proportionate to the economic development of the country. It is little use educating a boy to the capacity for enjoying and profiting by a higher and fuller life if, outside Government employment, there is no higher life for him to enjoy. The economic development of the southern Sudan is virtually prehistoric and has made little, if any, advance in the past hundred years. In the eighteen-seventies, according to Casati, the amount of ivory arriving in Khartoum averaged 148 tons per annum. This must have represented some 2,000 elephants a year and at so low a price as 5/- a pound meant an annual revenue to Government—it was a Government monopoly—£75,000. To-day the combined revenue of the three southern provinces is considerably less than this amount. The supply of ivory has greatly diminished and is diminishing every year. The devastations of the Mahdia everywhere reduced population and stock, and the latter are being continually further reduced by the periodic ravages of rinderpest. The disappearance of villages and herds in its turn let in the tsetse fly where it was previously unknown. Commercial exploitation of timber has only just begun.

Owing to transport cost, grain, sesame, and ground-nuts which grow profusely, have hitherto only been able to be absorbed by a limited local market. Cotton has been introduced on a commercial basis with some success, The results of experiments with coffee are still uncertain. Exhaustive prospecting has failed to discover any mineral wealth on a workable scale. On the balance the three southern provinces are a drain on the country rather than

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an asset and are hardly more productive than they were twenty-five years ago.

The economic possibilities of the south are conditioned by two factors. The first is that of transport costs, not only for the thousand miles river carriage to Khartoum but, in a country where animal transport does not exist, and distances are immense, of carriage to the local market. It is clear that prices for agricultural produce in the south must be very low. This need not necessarily alarm us as labour is cheap. That freights can be sufficiently reduced for the normal agricultural products to be marketable in the north recent developments seem to show.

The second factor is the economic value of the people themselves, which, with certain exceptions, is low. Their wants are few and can be satisfied with little labour ; psychologically they have little tenacity and little ambition. Education may remedy this, but only after several decades. A possibility meanwhile is reasonably increased taxation. This is disliked by the sociologists and can lead, and in the past has led, to the extremist forms of exploitation. But taxation in the southern Sudan is considerably lighter than in Uganda. A month's work enables a man to pay his tax, and whether we might not reasonably require him to do two months work a year, provided we can offer him a remunerative return for his labour, seems at least arguable. It is not that he is necessarily lazy. Though curiously averse to cultivating more than he requires for his own immediate needs and suspicious that the introduction of any money crop is nothing but a new Government tax in disguise, he is often very willing to work cheerfully for even low regular wages. The reason is probably that there is no waiting for the return for his labour nor doubt as to whether his products will be saleable when harvested : each day's work done

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brings its immediate rewards. As a result, until education has increased his tenacity and raised his standard of living, his productivity could probably be much increased by Government or private "plantations." In most localities no good employer would want for sufficient labour.

It would be difficult to overstress the importance of anthropology to the official in the south. As a probationer he has had some instruction in it before coming to the country, but in the north the scope for its application is limited. In the south the position is very different. Anthropology will enable him to observe and classify the tribes with whom he has to deal, and to understand the underlying motives of their customs and habits. The more he knows about them the better he will get on with them and the less likely will he be to give orders which will appear unjust and oppressive. It will enable him to formulate schemes of indirect rule which will fit in with their own ideas. It will enable him and the missionary to get the best results from education. And it will provide a fascinating hobby.

Many detailed studies of the Southern Tribes will be found in "*Sudan Notes and Records*," e.g. :—

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|----------------------------|-----|-----|-----|-----|---|
| <i>Bari Studies</i> | ... | ... | ... | ... | A. C. Beaton. Vol. XV. |
| <i>The Nuer</i> | ... | ... | ... | ... | E. E. Evans Pritchard. Vol. XVI. |
| <i>The Bongo</i> | ... | ... | ... | ... | E. E. Evans Pritchard. Vol. XII. |
| <i>The M'beridi</i> | ... | ... | ... | ... | E. E. Evans Pritchard. Vols. XIV and XV. |
| <i>The Zande</i> | ... | ... | ... | ... | Major P. M. Larken. Vol. IX. |
| <i>The Rait Dinka</i> | ... | ... | ... | ... | Major G. W. Titherington. Vol. X. |
| <i>The Lotuko</i> | ... | ... | ... | ... | C. G. & B. Z. Seligman. Vol. VIII. |
| <i>Nuba of S. Kordofan</i> | ... | ... | ... | ... | D. Hawkesworth. Vol. XV. |

Some Aspects of Nuba Administration ... J. A. Gillan.
(Sudan Government Memoranda.)

THE NOMAD ARAB CAMEL BREEDING TRIBES
OF THE SUDAN :
SOME NOTES ON THEIR HISTORY,
CUSTOMS AND GENERAL OUTLOOK

By J. A. REID
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*HISTORY, ENVIRONMENT AND PRESENT
MODE OF LIFE*

History

THE Nomad Arab camel breeders in the Sudan take a vast pride in their direct descent from the great tribes of the Arabian peninsula such as the Guhayna, Fezara, and especially the Kuraysh, the Prophet's own people. The very term "Arab" conveys an implication of superiority to the other less fortunate races. But the claim to pure Arab lineage must be qualified by the fact that the Arabs since their arrival in the Sudan in the seventh century A.D. have been marrying girls from the local non-Arab tribes so that the best that can be said for the blood of the nomad camel owners is that they are purer Arabs than others who boast a similar origin.

The coming of the Arabs to the Sudan has already been described and it is unnecessary here to enter into greater historical detail. Nomad Arabs are still illiterate

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almost to a man, their roving life does not encourage the preservation of arcana, and any documents they did possess, were destroyed by the Mahdia.

They arrived in Egypt in A.D. 639 from Arabia. Within seventeen years there is written evidence of a treaty made with the Nubian people of Dongola. In other words Egypt with its narrow confines and intensive cultivation was no country for a pastoral people and they started in search of pastures new almost at once. It should be noted that the Arabs brought no cattle with them from the Hegaz. The latter was too waterless for large cattle herds which must drink every second day. Cattle breeding was eventually adopted by the Sudan Arabs from the Blacks.

After the first inrush from Egypt, Arab immigration into the Sudan continued steadily. Previous to Islam, there had been a considerable amount of infiltration via the Red Sea. Traders and adventurers would cross the narrow waters and penetrate into the wide hinterland, but they nearly all returned to their beloved Hegaz. Now, however, with the calculated expansion of Islam, the Sudan provided a large field for permanent settlement, and the Arabs came not so much as conquerors as pioneers of peaceful penetration. In any case the advent of the Mameluk Dynasty in Egypt in A.D. 1175, with its anti-Arab bias, increased the number of immigrants, and finally in A.D. 1504 they allied themselves with the Fung and overthrew the Christian kingdom of Soba which is just south of Khartoum.

Henceforward, Arab influence in the northern Sudan became a predominant factor. The Fung themselves claimed an Arab descent through the Beni Omayya tribe, but whoever they were, Arab prestige under their reign

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spread rapidly. Arab armies conquered far west into Kordofan, Arab administrators and tax gatherers penetrated the northern confines of Dongola, and Arab religion and learning made such a name for itself in the Gezira that the seventeenth century has been described as the "golden age of the Sudan." The nomad Arab tribes were left undisturbed by the Fung kings. Provided they paid them tribute and produced a contingent for war, the Arab chiefs were omnipotent among their own tribes. Finally the Fung kings themselves became puppets in the hands of their Arab viziers and the country was wasted by civil wars between the opposing Arab "barons."

So that when Ismail Pasha invaded the Sudan in 1821, he encountered very little opposition. Once established, Turko-Egyptian rule was content at first to live and let live. Taxation was light and the chiefs of the great nomad tribes such as the Kababish and Shukria were left to their own devices with a very real measure of power. But the passing of the years brought about a grave deterioration of the administration which culminated in the revolt led by Sheikh Mohammed Ahmed, "the Mahdi," from Aba island on the White Nile in 1882. In three rapid years he obtained control of the Sudan, and when he died in 1885, Arab influence assisted by a religious revival was once more supreme. Unfortunately, his successor, the Khalifa Abdullahi, made complete misuse of his opportunities and introduced a reign of terror and oppression, which only ended with the advent of Kitchener's army and the battle of Kereri in 1899. Such, in very brief outline, is the historical setting of the nomads of the northern Sudan. Nomad Arab camel breeders are of their nature the last to be affected by historical and political changes. Living their roaming secluded lives,

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governed by customs handed on through the generations and self-sufficing for their daily needs, they are slow to react to outward disturbance. But once such disturbance has penetrated to their loneliness, and they are dragged into playing their part in a national revolt or other large movement, the whole tenor of their being is upset, and it may take a generation or more to restore equilibrium. The Khalifa's rule disintegrated nomad Arab life by massing them in Omdurman and by sending them on expeditions far beyond their local confines, and it is only within recent years they have recovered from the effects of their experience.

Environment and Economic Life

The nomad camel-owning tribes of the Sudan live between the 13th and 18th degrees of latitude. South of the 13th degree camels die because of "fly" which spreads trypanosomiasis ("ghuffar"), and north of the 18th degree there is insufficient rainfall to ensure the grazing. The camel country is mostly dry steppe land, long rolling plains dotted here and there with stony outcrops and occasional ranges of hills. Water supply, except in the rainy season, is confined to the river and the inland well fields with a lift of not more than forty feet. Wells deeper than this involve too much labour in watering large herds.

The climate is intensely hot in summer and intensely cold in winter. There is no green vegetation except in the rains, and in winter only in areas where the coarse winter "gizu" grass grows. Large trees are generally confined to the dried-up water courses, and a process of dessication has been proceeding for centuries. In other words, the nomad camel owner is born and bred in hard

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surroundings and to the end of his life he is in constant conflict with the forces of nature. During the summer he is scorched by the sun, during the winter he is paralysed by the cold, during the rains he is drenched by the dew. He roams with his camels over a zone where rainfall is light and variable and where water supply is a constant anxiety. The grain which constitutes his staple diet has to be transported from afar and his markets where he sells his animals and buys his modest requirements lie a long march from his home. Comfort, as we understand it, is entirely absent, so little wonder if he lives in the past and murmurs like the poet :

*"La vie est brève
Un peu d'espoir
Un peu de rêve
et puis—bonsoir."*

Life

The whole life of a camel-owning nomad centres round his camels. Just as he wears round his neck his praying beads, signifying the ninety and nine attributes of the Deity, so in his heart he keeps the numberless pet names of the camels in his herd. For the camel is not only his horse, but also his cow for milk and his sheep for wool. As the Arab himself says : "*Semha el sog fi ilbil banat daboro*" ("Lucky is the herder of camels, luckier than the possessor of beauteous maidens"). Once, long ago, I heard an old greybeard chant :—

"No milk of the bleating goat for me,
give me milk of the low voiced "naga";
when the grass is thinned
and carried away on the winds
the "naga" lifts her head to the high branch
and eats her fill."

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In the summer the herd is watered on wells or on the river, and grazes within a radius of about 50 miles of water. The camp is within a few miles of the watering place and is called "*damar*." In the heat of the season the herd is brought to drink every seventh day. It passes through the camp as it goes down to water, and after drinking generally stays the night in the ferig before going off to graze. Camels are not watered in one operation, but after their first long drink are brought back to water "*tahwish*." The health of a beast is often judged by the extent to which he fills himself out with water. Whether on the river or on the wells, each camel-owner has his special drinking day. This is called "*dimi*." The night before the "*dimi*," his herdsman and sons fill the mud troughs so as to be ready for the watering early next morning. An ordinary herd of camels numbers from 40 to 100 beasts. There are generally two stallions. These are carefully chosen and are often brought from long distances. Among most Arabs in the Sudan it is the milk and hair which is most necessary for the household, so the tendency has been to breed a heavy type of rather soft baggage camel. Good riding camels west of the Nile are the exception, and these have generally to be procured from Berber, the Red Sea hills and Kassala.

As soon as the rain clouds appear, the herd moves off southward in the hope of grazing on the new green grass of the early rains. When the herd first starts, the houses and women of the herdsman are left behind at the "*damar*" and it is not until the rains are well set that the baggage camels are sent back to move the camp. This main movement of Arabs in search of green pasture is called "*nushugh*," and it is the time when the heart of the Arab is light, as he has not the work of drawing water,

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and his beasts have their fill of green grass. As the tribes go forward on the "*nushugh*" they move in parallel lines so as to avoid cutting across, and fouling each other's grazing. In the old days when the fear of an armed attack was ever present, each tribe or section of a tribe on the "*nushugh*" had its own "*mek*" or leader. It was the latter's duty to keep the herds together in case of attack, and to prevent their crossing the grazing line of neighbours or friends. During the "*nushugh*" the herds are "salted" at least twice at some water hole or lake where there is natural salt in the earth. If this is not procurable, baggage camels are sent back to buy salt at the nearest market. The Arab encampment is moved approximately every ten days on the "*nushugh*," but of course the exact period depends on circumstances. The moving of camp is called "*rahil*," and the signal is given by the Sheikh beating the drum ("*nuggara*") in slow beats. When he wishes camp to be made, the drum is beaten faster. The Sheikh pitches his tent on the south-west side of the camp with its front facing east. Nobody pitches tents west of or in front of the Sheikh's except his own personal family or servants. Before camp is moved to a new place, it is usual to send out scouts ("*dauwar*") to ascertain where the best grazing lies.

As soon as the rain water dries up the herds return to the wells or river, but the permanent summer quarters are not generally fixed until well into winter. This is because so much depends on the grass available round the different watering places, but if there is a sufficiency of grass, the tendency is to return to the same "*damar*" for a number of years. During the winter grazing camels are not watered for months on end, and as the "*nagas*"

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are generally full of milk at this period, the women folk often accompany the herds so as to get the benefit of the milk. In the far north-west, the camels go off to what is known as the "*gizu*." The "*gizu*" is a coarse green grass which comes up after the rains, and while grazing on it the camels require no water. The conditions on the "*gizu*" grazing are hard for the herdsmen. There is no water supply, the cold is intense, and there is a marked scarcity of firewood. Further, there is always a chance of attack from the Gur'an, Bedayat, and other western raiders. So it is only the hardest youths who are sent out.

CUSTOMS

Marriage and Divorce

When a man wishes to marry a girl, he sends a deputation ("*agawid*") to her father. The deputation address him "*Abu Fulana*" (father of the girl named so-and-so) and inform him that they want his daughter as wife for the suitor whom they represent. The father invariably replies to their request by saying "*In sha Allah kheir*" ("God willing all will be well,") and asks for a period in which he may consult his relations. A council of the latter is held, and if none of the girl's cousins want her in marriage, and if there is no objection to the suitor, the girl's father on the date appointed informs the suitor's "*agawid*" that he is willing to give his daughter in marriage. They then go to fix up the "*mahr*" (dowry), with the bride's mother. The bride's people try to get as much as they can, while the suitor's "*agawid*" try to give as little as possible. Finally, a compromise is reached and the bride's people generally forego part of the agreed sum. This is called "*diyafa*." Nowadays, £10-£20 and a number of camels is a usual "*mahr*" among the nomads, but, of course, circumstances vary. After the "*mahr*"

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is fixed, the "*agawid*" settle the "*adal el beit*" which is the money and property paid to the girl's mother for her trousseau and her marriage expenses. The latter consist mainly of animals to be slaughtered, clothes for her female relations, scent, oil and grease. As in the case of the "*mahr*," there is a compromise between the girl's mother and women folk and the suitor's "*agawid*." A special bridal house called "*hegil*" is built by the bride's people. At first this is simply a small shelter, but after the marriage ceremonies are over, it is enlarged and filled with the bride's household equipment.

The day before the marriage the bridegroom gives presents all round to the bride's relations, slaughters animals and makes a feast. If he is a bachelor his finger nails are stained with henna, and he proceeds to the bride's house and puts some henna on her outstretched hand. On the marriage day the bridegroom (on his first marriage) puts on a "*tob*," a "*sirwal*" and a "*darira*" (marriage cap). On his right wrist is slipped a silver bracelet with a red silk cord and a green bead. Round his neck is also a red cord, a bead with gold at the ends, on his right middle finger is a silver ring with a coloured stone. This whole jewellery outfit is called "*gertig*."

The bride has a silver bangle on her right wrist with a red cord and a bead, and wears a single bangle on her left wrist and two silver anklets. In addition she adorns herself with what is known as "*hiflat el arus*" which consists of various gold and silver ornaments round her neck and her thighs.

The bride is left in her house while the parties appear before the "*fiki*," who performs the ceremony. The bride is represented by a proxy generally her father or uncle. The "*fatiha*" is pronounced as a kind of benediction.

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There is much "*lulwing*." The bridegroom comes in the evening to the "*hegil*" meets the bride and cuts her "*rahat*." The bride then returns to her father's house and remains there for six days. The bridegroom in the meantime sleeps every night in the "*hegil*" and on the seventh night the bride is escorted there and the marriage is consummated. The bride and bridegroom remain together in the "*hegil*" for forty days, after which they resume their normal life.

In good families it is customary to leave the daughter with her parents until she has borne two or three children. While she is with her people, her husband supplies her with clothes, scent and grease only, and he would give his father-in-law great offence if he suggested a contribution of grain or meat. Finally, after the birth of two or three children, the wife is moved to her husband's house, leaving one or more of her children with her mother.

It is to be noted that neither as suitor nor as bridegroom does the man ever come face to face with his mother-in-law. They do everything to avoid each other, and even late in married life shun one another. The father of the bride on the other hand after the marriage has frequent dealings with his son-in-law.

The bride will not converse with her father-in-law until she has had children or has been married some time.

The mother-in-law receives both the "*mahr*" and the "*adal el beit*" of the girl. The father-in-law is precluded from taking the least share.

A young girl has often little say (though her mother generally questions her) as to whom she will marry, but a widow or a divorcee has more freedom. In a good family, however, the request for the girl, even if she is a widow, is made to her father through "*agawid*."

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Among nomads a man generally marries as his first wife his paternal cousin. The match has often been settled by the parents when the parties were young children. For his second wife, he may go further afield, but there is always the knowledge that a "foreign" wife generally costs more to marry, and is not so satisfactory once married. Above all, there is the dread of the property going out of the family. When a man marries his second wife, he generally propitiates his first choice by a present (*radwa*). If his double harness pull together, they live in common, but as generally the wives disagree, a separate establishment has to be maintained for each. Hence the expense which precludes most men from having more than one wife.

In a double or triple establishment, the senior wife acts as banker for money and food stores, but if she is not reliable, this duty often falls on a faithful servant.

Man and wife do not eat together until they have reached a ripe age, and then only on the invitation of the husband to the wife. Sons do not eat with their fathers except on special invitation, and never in the presence of guests. Servants generally eat with their masters, but the young ones with the master's sons.

When a child is born, the happy father makes a gift of camels to the new-born babe. The gift is remembered and claimed by the infant in later years. It is called "*hagg es surra*."

Women, especially unmarried women, among the nomads have almost unlimited freedom. When a girl gets married, she is not supposed to appear so much in public, and never with her head uncovered. A rich man keeps his wife secluded, but the poor Arab sends his woman to fetch and carry.

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Divorce

This is fairly common, and the most frequent cause is childlessness. A man is loath to divorce his first cousin, and still more loath if she has borne him children.

Once a woman is divorced, the "*mahr*" and the "*adal el beit*" paid for her is left "on her back." That is to say, her husband does not get his money unless she marries again. In any case, he generally foregoes a part of the sum, and never includes minor expenses in his bill against the new husband. The latter, before he proposes marriage, sends "*agawid*" to the girl's father and to her former husband. From the girl's father he wants a general consent to the marriage, and from the girl's former husband he wants to know how much he has to pay. As usual there is a compromise, and the former husband never demands the full sum unless the new husband fails to consult him. In that case payment in full is demanded.

Alimony "*nafaga*" is almost unknown among nomads and never enforced. Custody of children, according to strict custom, is the right of the father, but in practice the mother gets the girls. Young children are, of course, left with their mother until they get older.

A divorced woman returns to her father's people. She takes back with her any movable property she brought from her father's house and unless she has been guilty of a heinous offence, she is provided with transport. In a case of divorce for adultery, a message is sent to the girl's father to take his daughter away.

Blood Money and Compensation for Injuries

"*Diya*" or blood money was originally reckoned in camels, which at the time were the token of wealth. 100 camels is strictly the blood money of a free man, but in practice, 40 to 50 camels or their money equivalent is

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accepted. Sometimes when feeling has been aroused, the deceased's relatives demand the death penalty and refuse "*diya*." In such cases the offender's relations obtain the intercession of some *fiki* who persuades the deceased's people to accept blood money. The offender who then escapes death is called "*atig el fugara*" (*atig* is used of an animal recovering from a serious disease and becoming immune; "salted" is the English equivalent).

For the murderer fleeing from the wrath of the deceased's relations there was sanctuary to be found in the house of well-known *fikis* or of the sheikh of the tribe. Under no circumstances would a host deliver his guest to the mercies of the dead man's relations. He would refuse their entrance to his house until "*diya*" had been agreed upon.

On other occasions, especially in accidents resulting from petty brawls among friends, the deceased's people forego the blood money, and reserve to themselves the right of balancing the death of their relation against the death of a man on the offender's side if this should in the future occur. This is known as "*firash*."

"*Diya*" is paid by the whole tribe and not by a particular family or section. Generally, however, the offender's relations pay up to a quarter of the sum involved. The "*diya*," when collected is distributed in three shares among the deceased's tribe: half of the total sum is handed to deceased's near relations, a quarter goes to the head of the tribe, and the remaining quarter among more distant of the deceased's relations and among the tribal *fikis*.

Severe bodily injuries are compensated according to circumstances. The sum paid for the loss of major limbs or an eye extends to half the blood money, injuries to minor limbs is on a similar comparative scale, but in

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nearly every case there is a compromise, and the offender's "*agawid*" persuade the injured party to forego part of his claim. The expense of medical treatment, "*hagg el kamida*" as it is called, is reckoned additional to the compensation claimed. Minor injuries are dealt with by the chief who imposes a fine and generally takes the money paid for himself.

Food and Perfumes

The staple food is "*kisra*" (dura bread), milk and "*merissa*" (native beer). In the dry season the Arabs eat a considerable quantity of meat although sheep are only killed on the arrival of a guest, at a sacrifice or thanksgiving ("*Karama*") or a feast ("*azuma*"). Camels are slaughtered on important occasions such as weddings or in times of hunger and hardship. Coffee is taken in the early morning but the chief meals are at mid-day and in the evening. When the camel herds go to the "*gizu*" grazing grounds in winter, they have nothing to live on except camel's milk. It is regarded as a most nourishing diet and weakly boys are sent off to the "*gizu*" to get strong.

The various fats, all of animal origin, are used more for scents than for food. "*Dihn*" is drunk as a curative for internal pains and a general tonic and butter ("*samn*") is eaten by Arabs who possess sheep. A "*dilka*" consists of coarsely-ground dura and sandal wood mixed with various scents. A hole is dug in the ground, the mixture is cooked in a bowl until it is ripe when it is poured into a basket ("*keroia*") and used for massage as required.

The "Utfa" or Ceremonial Camel Equipage

When camp is moved or a journey has to be made, young married or marriageable women ride on camels in

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an equipage called the "*utfa*," which in old days was the rallying point in battle. It consists of:—

- (1) "*Shalil*," large squares of plaited leather work embroidered with cowrie shells, and hung on either side of the camel.
- (2) "*Mafari*," light specially tanned skins, covered with bits of lead metal and cowrie shells, and placed behind the saddle seat.
- (3) "*Lebab bidawair*," decorated girths for the saddle, with leather tassels which swing in the air as the camel moves.
- (4) "*Gumbur*," the conical head-piece on the camel, decorated with cowrie shells and ostrich feathers.
- (5) "*Rasan*," the decorated leather head rope.
- (6) "*Wisada*," the cushion, decorated with lead metal pieces, on which the lady sits.
- (7) "*Keroia*," basket covered with leather for carrying the lady's scent, sugar, etc.
- (8) "*Durban*" and "*dabya*," long leather bags, specially tanned.
- (9) "*Baasa*," holder for ostrich feathers on top of the "*utfa*." This is the flag of the "*utfa*."
- (10) "*Durasa*," camel bell.
- (11) "*Dayul*," tail piece for camel, with holders for ostrich feathers.
- (12) "*Husr*" and "*gerabig*," side pieces which are fitted over the "*shalil*."

"*Nahas*" or Battle Drum

It consists of three or more copper drums called the "*tor*" (bull), "*baggara*" (cow) and "*igla*" (calf), according to their size. The "*nahas*" is the emblem of tribal authority and is used by only a paramount chief. There is a considerable amount of superstitious reverence attached to it and sacrifices are made in its honour.

Death and Mourning

After a man dies, his eyes and mouth are closed by his brother and father, and his body is washed by his chief male relations. It is then wrapped in a burying shroud and a grave is dug in the near locality, often near the foot of a hill. Before the body is carried to burial, a sheep is killed and this is repeated on the second, third, fourth, and fifth day after death. The corpse is carried out of

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the tent and taken round to the back and rested there for a few minutes. It is buried lying on its right side with the face turned eastwards towards Mecca and the feet towards the North. After interment, the grave is surrounded, if possible, with a thorn or wood palisade and the water is sprinkled over it. For forty days, or at least for seven days, the relatives of the deceased make mourning ("farash"). They sit on mats or carpets in their tents and receive the sympathy of their friends, who make special visits for this purpose, and pronounce the "*fatiha*." When the mourning ("farash") is over, a further sacrifice is made, and people return to their normal occupations.

General Outlook

The nomad camel-owner is entirely pastoral. His whole life consists in herding his flocks and looking to their welfare. In agriculture he has no interest, and he is inclined to despise the mere tiller of the soil. The nomad is a dweller in tents and a sojourner in lonely places, so both his blood and his ideas flow in narrow channels. Similarly he is a materialist because he is in continual conflict with nature. In the desert where every man's hand is against every man and nature is against them all, it is obvious that there is good soil for the growth of intense family feeling, and this is increased by the custom of cousin marriages and the innate conservatism of the women. Among the camel-breeders, the woman, especially the mother, exercises a powerful influence and all this is thrown on the side of tribal tradition and inherited custom. So it is not strange that the Arab's ways lie along a narrow path and that the men folk are loath to leave this path because they fear their women. Moreover, although the nomad is more superstitious than

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religious, his life of loneliness has made him introspective and prone to embrace austere cults like those of the Wahabi and the Senussi. Finally there is his cruelty and sloth, both products of his environment, cruelty because he has learned a hard lesson in a hard land and believes in an eye for an eye and a tooth for a tooth, sloth because he exists under exhausting conditions and feels he must conserve his energy for a crisis.

Despite, however, all his faults the nomad Arab camel-breeder is a most attractive personality. He is full of intelligence and character, he is the soul of hospitality and generosity and provided he is handled in the right way, he will respond to leadership. There are five essential requisites for dealing with him :—

Firstly. One must know his language well enough to be able to convey and receive the slight intonations which mean so much.

Secondly. One must have read and learned sufficient of his history, traditions and customs to understand his mental make-up.

Thirdly. Unless one shows sympathy, the Arab will scent hostility and react unfavourably.

Fourthly. Courtesy in its best sense enters into almost every phase of his life, so unless it is returned he will take offence.

Fifthly. There must be a generous spirit of compromise and entire absence of rigidity. The Arab has his own way of doing things and his ways are not ours, and if we over-insist on our ways, he simply gives up trying. If we appreciate his ways and remember we are strangers in his country, he in his turn will give us credit for our patience and respect us for tempering justice with mercy.

THE BAGGARA TRIBES

By G. D. LAMPEN

Sudan Political Service

THE Baggara, who are, as their name implies, nomad cattle-owners, occupy a strip of country comparatively narrow from North to South, but stretching from East to West across a great part of Africa, from the White Nile to the west. In all this area the Baggara find much the same conditions. A range of high land in the north, usually sandy, where the cattle can take refuge from the fly in the rains. As the water supply here dries up in the autumn they move south to the plains, where the pools last until the end of the winter. Then as the water dries upon these plains the large herds all go down to the river land where they remain till the oncoming rains again drive them north.

The Baggara are thus limited in their range and in their contacts with neighbours of other habits. They are only in touch with their northern neighbours for a few months in the rains, and then not with the camel-owning nomads who are themselves moving away from the rains at this time, but with the sedentary who cultivates on the goz and who is more often a negroid than an Arab. Except in certain areas their contact with Arabs other than Baggara is very limited. They have, however, a stronger connection with their black Southern neighbours,

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for although they remain on the river lands with their cattle for only a short time, individuals are tempted to penetrate far south for game or honey, and in the old days for slaves.

No doubt their isolation from other Arab tribes has done much to emphasise their peculiarities. They speak a very distinctive dialect, using many onomatopœic words, many emphatic particles and with a number of grammatical variations from ordinary Sudan Arabic. They also have many peculiar customs, especially in marriage, and their women enjoy a freedom unknown among sedentary Arabs and even among the northern nomads. But a stronger influence on them than this isolation has been their close connection with the black tribes of the south. Their proximity, and the fact that slaves sent north would first pass through their hands when they would detain the best, has led to a great admixture of black blood in the Baggara, so considerable that many of them are rather negroid than Arab in appearance. The men have usually thick lips and snub noses, and the women are small in stature and have often very short hair, and the prevailing colour everywhere is dark rather than light. One finds the ex-slave rearing his master's children and marrying his own to them without occasioning more than a passing comment, and often from their appearance one would be hard put to it to say which was of slave blood and which of free. Yet they have succeeded in maintaining their pride of race and imbuing their freed slaves with much of their independent spirit.

Passing to a more detailed view of their way of life, one of the most important features is the lack of mobility of the cattle-owner. He cannot ever escape to the south with his cattle, and usually only during the rains can he leave his dar to the north. Although he can move sur-

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prisingly fast when endeavouring to escape from his tribe, he is usually bound to follow a definite route, and if he would save his cattle he must slow down his pace after a few days. Here I think we have an explanation of one of the Baggaras' unexpected qualities, their comparative docility under oppression both from outside enemies and from their own rulers. They have an independent spirit which shows itself particularly when a few men of the same family band together, but taken as individuals, and even as tribes when confronted for instance with powerful Fur Sultans, their inability to escape with their herds, and probably also their share of servile blood makes them unexpectedly submissive. Their circumscribed range and infrequent visits to towns also tend to make them less men of affairs than more mobile tribes.

The same qualities combine to make them great intriguers. Too independent to put up with a ruler whom they do not want and too cautious to risk open opposition, they turn to less overt methods. They are unabashed liars and employ every method possible to poison the minds of those in authority against an opponent or to seduce his followers from him. A small incident such as a nazir being summoned to the Merkaz is made the ground for announcing his dismissal and encouraging his rival to rally his party.

The limited range of these tribes is extended once a year in the rains when they take their cattle long distances to the big markets to be sold. This is the great event of the year, and the fact that it is the only time when they can realise a considerable sum of money at once has an important effect on their way of life. They have no continuous source of revenue such as the camelman has in hire of his animals. Their profits from sale of butter are made in a few months during the rains, and are supple-

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mented by sale of bulls at the same time. The proceeds quickly go in taxes, sugar, tea and clothes, and then the Baggari resigns himself to the scarcity of summer. Fortunately for them the dry months do not usually mean harder work in watering as all the bigger herds do not summer on wells but come down to the open water of rivers or marshes.

They pass their time in a pleasing idleness spent by day under the shady trees and by night in sitting round the camp fires, a lethargy born of the easy conditions of the south where scarcity rarely becomes hunger as their meagre diet can always be supplemented by wild crops, honey, fishing and hunting, and arising also from the climate which makes many a Baggari a hive of diseases ; malaria, syphilis, bilharzia and guinea-worm are too often found in one individual and renders all of them subject to racking pains and fevers. Their share of black blood has given them a more robust physique than the northern Arabs and noticeably better teeth, but they have paid a great penalty for living in the marshes.

This robustness of physique has its counterpart in certain mental qualities. They are less querulous and melancholy than the purer bred Arabs. Their jollity is particularly noticeable in their vehement African dances, in their smiling friendliness and happy charm which replace the more dignified and sophisticated manners of the northerners. Their cruelty, avariciousness and malice are rather those of the child or the savage than of the grown man and give way with bewildering rapidity to generosity and kindness.

I have spoken of their extreme laziness which leads them to postpone every act till it can be put off no further, as they are at all times assured of a sufficiency of food, adequate shelter and abundant water. They do, how-

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ever, periodically show bursts of energy in organising hunting parties. These are of two sorts, being composed sometimes of men who have lost their cattle from rinderpest or other plague and wish to recuperate and sometimes of permanent hunters who find it a more entertaining and perhaps more profitable life than cattle raising. The sporting instinct is usually subordinated to the love of gain, and the increasing scarcity of valuable game has turned many hunters into bands of workers going to the Gezira to pick cotton. Giraffe hunting involves a hard chase of half an hour or an hour, but elephant hunting may occupy several months of hard travelling and privation which are now not often adequately rewarded by the profits. But although their main end in hunting is profit, their bravery is not in question once they are engaged, and they are always prepared to risk a possible death or the almost certain result of a man being mauled in order to round up a lion which is damaging the herds.

Inter-tribal cases among the Baggara are not frequent. They usually occur over questions of watering and grazing but, as both are plentiful, disputes are less frequent than in more desert regions. They are not jealous of their boundaries and if dues are paid no question of trespass as a rule arises. In fact, following long tradition, the tribal heads are only too ready to harbour anyone from other tribes. On the whole, however, boundaries among such tribes are not and should not be precisely fixed. Varying conditions in water and grass-supply from year to year necessitate a lot of give and take, and if each tribe can be kept to a certain general area no definite boundaries need be drawn. Most tribes allow strangers to spend the summer within their boundaries, after an acknowledgment of their rights accompanied by a small present.

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Many of these remarks no doubt apply to tribes other than the Baggara, for, in spite of certain noticeable peculiarities, one is always realising how great are the resemblances between the branches of the great Arab family, so much so that Doughty's *Arabia Deserta* would be a most valuable introduction to work among the Baggara tribes.

Their dependence on and love for their herds is not, of course, a feature peculiar to Baggara Arabs, but a few remarks on cattle-breeding must find a place in every note on these people. It is obvious that their cattle are not of very good quality and one of the first ideas that appeals to a District Commissioner is to find some method of improving them. The Baggara are not unresponsive to any scheme of improvement and needless to say they will accept anything in the nature of a gift of herd bulls with enthusiasm. When, however, it becomes a question of changing their own rather haphazard breeding arrangements, many things previously unconsidered will obtrude themselves. Their system of castrating their bulls when almost full-grown and at a definite period before marketing, their intimate knowledge of the breeding of their own bulls, their liking for qualities quite apart from meat or milk production, such as shape of horns, pugnacity and style in the herd bull, their method of herding five or six men's cattle together, each with their own complement of herd and scrub bulls, have all to be considered before any drastic scheme of cattle improvement is initiated.

Their horses are a much less important part of their life than their cattle ; they are primarily more of a luxury and a means of locomotion than a necessity, and their breeding can therefore be subjected to more thorough control, so long at least as the Government is prepared to buy horses on a large scale from them.

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Baggara hunting also is an activity which requires to be carefully handled. Not only does giraffe-hunting, for instance, give the young men an opportunity for expending surplus energy which used to go in less innocent pursuits and might do so again, but it affords the man who has lost all his cattle in a plague the opportunity of earning five or six pounds and starting a small herd again. In the days when profitable ivory could be killed, he could, of course, quickly recuperate. It is now rather sad with the decay of hunting to see numbers go off to the East to earn money which so many never retain long enough to enable them to return to their tribe.

Closer administration by Government since the re-occupation has naturally had modifying effects on tribal structure and authority. In their organisation we have made one vital change by introducing Omdas. The previous scheme was a Nazir, supported by his relatives as Manadib, forming an executive entirely under his control, and directly under the Nazir Sheikhs of the smaller Khashum baits or sections. If the Nazir was strong the tribe tended to be a large one such as the Rizigat. When the Nazir was weakened, the large tribe often broke up into two or three smaller tribes, and one might find the Nazir of the Rizigat reduced to being Nazir of the Mahria only, with rival Nazirs of the other two sections of the Rizigat tribe. Our introduction of Omdas was on the whole beneficial. It provided a class better able to control a headstrong Nazir than were the numerous Sheikhs, and on the other hand the Omdas provided a force against disruption; they do not as a rule represent big enough sections nor have they a firm enough hold on their office to seek for independence, and they provide a barrier against the break up of a tribe under a weak Nazir. The Nazir's Manadib are a

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very necessary class to whom we have not always paid enough attention, with bad results. The Nazir of a large tribe must have lieutenants who can represent him with authority ; Omdas may have considerable authority, but it is rigidly confined to their own Omodia, they are rather too important to submit themselves implicitly to a Nazir's often secret and urgent missions, and they are not as a rule greatly trusted by him. Hence arises this important office of Manadib, who having authority, being trusted by the Nazir and owing their position entirely to him, lend themselves readily for much that is undesirable unless their position is regularised. They should be salaried and fully recognised and great care expended on their selection.

The advent of native Courts in these tribes tends to curb the Nazir's despotic power rather than to afford him powers hitherto unknown among these people. In fact, among these very ambitious people, the Court itself often tried to exceed its functions by appropriating executive power. Their introduction has thus tended to curb the worse abuses of the Nazirs.

Our incursions in Education have hitherto not been very satisfactory. The tribes themselves do not wish to lose their boys from herding in order to make them clerks. The few local schools are also of a very low level and it is difficult to get material with which to improve them. At the same time there is a serious shortage of local boys to fill the few clerical posts on the Native Administration staffs, and it is common in Darfur for these to be held by foreigners. There is a great need for a school to be attended by all who would be likely to hold important posts in the Native Administration in later years, where they would learn reading, writing and simple arithmetic really well and where the rest of the curriculum made them familiar with the methods of combating cattle

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plague by injections, of treating human diseases, of the simplest scientific methods of increasing honey production and building good grass houses, in all of which help and advice can only be given to a tribe prepared to receive it, and for which these pupils would act as propagandists.

A more immediate appeal to the Baggara can be made by prophylactic treatment for cattle plague, and with ample supplies of serum and vaccine it is possible to suppress both rinderpest and bovine pleuro-pneumonia. The keeping of adequate supplies of fresh serum in the further west is a problem that has not yet been solved, and the persuasion of the Baggara to receive treatment and accept strict quarantine requires patient explanation and firm measures for some time yet.

Medical work is to some extent limited by the conditions of the country which must remain a breeding ground of malaria, guinea-worm and bilharzia for an indefinite period. Syphilis, once rampant, is now apparently disappearing under treatment, but, unfortunately, gonorrhœa is increasing. The very easy moral code of the Baggara, which places practically no restriction on sexual intercourse with unmarried or divorced women who are no longer virgins, is a serious factor in spreading this disease, and the tackling of this disease in the towns, still the main source of infection, is a matter of urgency. The most spectacular, and therefore politically very valuable, triumphs of the Medical Department have been in operations, which have often had to be done in most difficult conditions during Horse Shows. The enormous relief given to a nomad by successful surgical treatment of hernia or hydrocele causes him to regard it as little short of miraculous. A lot of propaganda work remains to be done, however, before these procrastinating people can be

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persuaded to attend a dispensary in time or at all, except for treatment by novarsenobillon.

There is really only one method of approaching all problems in the Baggara tribes and this is to get to know the people intimately. Among a people who are yet liable to oppression from their rulers it is possible and desirable to know many persons of all classes and sections. They are great conversationalists and always ready to talk, particularly under the influence of their thick syrupy tea. It is impossible to help loving them, rascals as they often are by our standards ; they have had in the Mahdia a bad up-bringing for the humaner virtues ; our hope of improvement here lies in the next generation.

Note.—Further reference can be made to a more detailed article by the same writer which appeared in *Sudan Notes and Records*, Volume XVI, Part II, 1933.

THE BEJA TRIBES OF THE RED SEA HINTERLAND

By D. NEWBOLD, O.B.E.

Sudan Political Service

THE "Fuzzy-Wuzzy" is a familiar figure to steamship passengers at Port Sudan. His nonchalant walk, his fine physique, and the "hayrick head of hair" described by Kipling, make him stand out, at coaling time, from the little bustling Yemenis and the nondescript dock-loafers of mixed origin. Elderly tourists may recall that the warlike Hadendowa once broke a British square, and that the name of Osman Digna figured for several years in the London headlines. Otherwise little is generally known of the large block of Hamitic tribes called *Beja*, who occupy about one-tenth of the Sudan's area, and range across the north-eastern quadrant of the country.

There are four main Beja tribes; the *Bisharin* in the North, most of whom live like conies in the rocks, and pass a wandering and frugal life in the foothills of the great watershed which is visible to all Red Sea steamers, and on the vast Atbai plains sloping westward to the Nile: the *Amarar* further south, a more compact tribe but also scattered hillmen, who range from Musmar to Port Sudan parallel to and north of the present railway: the *Hadendowa*, the largest and best-known tribe, who originally inhabited only the tangle of hills and glens round Sinkat

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and southward as far as the southern slopes of the great Warriiba massif, and who later multiplied and spread still further south over the plains of Odi and Tibilol until they occupied most of the delta of the River Gash, and pitched their matting tents on the northern bank of the Atbara as far upstream as Latitude 15°: and lastly the milder and more sophisticated Beni Amer, who lie to the East of the Hadendowa and move between the Tokar littoral, with its rich spring verdure, and the jagged mountains on the Kassala-Eritrea frontier, and who have such an admixture of Semitic blood that some anthropologists hesitate to call them Beja.

In addition there are a dozen or so minor Beja tribes, Arteiga, Kumeilab, Shaiab, Halenga, etc., a few of whom cling to the skirts of the larger tribes, but mostly stressing their independence and producing long genealogies and traditions of a powerful and warrior past. The majority are allied linguistically with the Beidawi-speaking group (Hadendowa, Amarar, Bisharin, etc.), but some oddments belong to the Khasa-speaking congeries of tribes known as Tigré, which includes most of the Beni Amer clans.

Although many Beja are bilingual, that is, speak Arabic as well as either Beidawi or Khasa, and although they are all professing Moslems, they are not Arabs in any real sense, and only resemble them, in spite of the faked pedigrees of "*Koreish*" ancestry, in the one particular that they are mainly pastoral and semi-nomadic. The Arab is a medieval intruder into the Sudan. The Fuzzy has been in the Red Sea hills for at least four millennia, and has oral traditions going back to heroes and battles 1,200 years ago. The Arab is gregarious, and, despite tradition, garrulous. The Fuzzy is solitary, shy, and reticent. He is not such a slave to social inhibitions and tribal ties as the Bedu, and exercises a broader judgment

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in making friends with foreigners and adapting himself to an alien environment. His aloofness, which even acute observers mistake for sullenness, is compounded neither of fear nor of self-consciousness. It is an individualist trait born partly of incuria and partly of centuries of mountain life. He is bored with strangers rather than actively xenophobe. The Arabian desert breeds a clannish sociability, which even among the austere Wahhabis of Nejd, draws tribesmen nightly together to sing or bicker or gossip over the endless coffee-cups. But the Red Sea hillmen, except the Beni Amer, dislike big encampments : their houses, built of "*birsh*" matting stretched over curved poles, are usually sited alone or in twos and threes up the feeder-khors of the main wadis : the trekking District Commissioner nearly always comes upon them round a corner : the aeroplane overhead and the passing stranger on the ground alike hardly elicit a turn of the head. So they dwell, like the old crofters of Sutherland, in pockets in the hills and on the plateaux, unseen by the world, living on milk and grain and occasional meat and sugar in times of plenty, and on milk and little else when the alternate perils of locusts, drought, and rinderpest threaten their grain and beasts.

The impact of modern civilisation has, of course, diluted this detachment and individualism, and the centripetal attraction of the cotton schemes of the Gash and Baraka deltas have created new and close-packed Beja communities. Mushroom villages have sprung up by canal sides and on cotton blocks, and new tribal orientations have followed. Here the tin shops of the pedlars, the incessant stream of lorries, the everlasting chatter on money and prices have opened up new horizons and quickened the brain of the Fuzzy without, as yet, having sapped his moral fibre. The future is on the knees of the gods, but measures

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against detribalisation are not beyond the wit of man, and there is no reason why Beja native institutions should not be enlarged, as some already have been, to cope with the economic problems on the same lines as the problems of justice and public security. Beja customs and the Beidawi tongue are tenacious, and in the Town Court of Tokar and the Village Courts of the Gash, the ancient lore of "*Sharia*" oaths and of blood-money is brought into play by the merchant J.P.s with as much solemnity as among the conclaves of sheikhly greybeards in the remote Atbai.

The standard of Beja cotton cultivation is unequal, but the average is not low, and it is a triumph to have coaxed a stubborn conservative and pastoral people to grow cotton at all in the circumstances in which the Gash scheme first came into being.

In the Red Sea hills and plateaux the Fuzzy has elbow-room to graze his herds and plant his meagre corn without having to consider the rights or claims of foreigners. His squabbles about land or water or grass are with other Beja whose speech and logic are his own, and who will agree on a tribunal. In Tokar and on the Gash lands and in the environs of Kassala town he meets people whose speech, clothes and habits are alien—the gypsy Rashaida camelmen, who are recent immigrants from the Hijaz, the Fellata cultivators from Nigeria, and the Shukria, a large nomadic Arab tribe who for centuries have bordered the Hadendowa to the south and been on alternate terms of amity and feud. Although to many of his more sophisticated neighbours the Fuzzy has long been regarded as "*muta-wahhash*" (barbarian), feared as a foe and hated as a brigand, knowing nothing of the refinements of food or clothing or shelter, yet the Fuzzy himself has felt no inferiority complex, and calmly relies

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on the diplomacy and sagacity of his chiefs, as of old he relied on his sword, to maintain his boundaries and resolve his feuds.

The present Nazirs are fortunately of such calibre that the Fuzzy is being admitted by the more advanced tribes into the "comity of nations," and his bond is accepted, when endorsed by the head of the tribe.

Further, so far has the respect of its neighbours for the Hadendowa Nazirate increased under the aegis of its present holder that certain non-Beja tribes whose future constitution is in doubt, e.g., the Rashaida and some sections of the West Africans, have made overtures for amalgamation with the Hadendowa under the sovereignty of the historic Hadendowa ruling house.

Properly to understand the racial characteristics of the Beja we must delve into history, and in so doing we cannot fail to be struck by the pertinacity and vigour of a race which has attracted the attentions, welcome and unwelcome, and felt the impact of more powerful nations from time immemorial without experiencing any real disintegration or loss of morale.

The origin of the Beja is lost in the mists of antiquity. A learned Sheikh of the Amarar who made recently a compilation of Beja historical traditions began his essay as follows :—

"The Beja are attributed to Kush, son of Ham, son of Noah, and emigrated to the Sudan from Asia after the flood." In other words he echoed the experts in supposing the Beja were a Hamitic group in Arabia who crossed the Red Sea in one of the many early irruptions from that unstable country. Seligman has shown that they are akin to or derived from the predynastic Egyptians. At a very early time they settled in the Eastern Desert, a barren hilly country of scanty rainfall. Here they

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acquired or developed their stubborn and independent character. But, remote and self-centred though they were, they were not destined to be left alone. They were bounded by ocean and river and waterways, along which Emperors were to send scouts and merchants, and even the rocks on which they trod contained the oldest lure in the world—gold.

The early Pharaohs could not long have maintained their magnificent state and their great temples without the continual stream of gold drawn from the Red Sea hills. Nubia was conquered in the Middle Empire and from 2000 B.C. onwards gold was diligently extracted from the quartz veins of the Eastern Desert. There is a striking representation of a Fuzzy tribesman in a tomb chapel at Meir (Upper Egypt) dating about 1900 B.C., showing the slender limbs, pointed nose, retracted abdomen, broad chest, and the great shock of hair of the modern Bishari or Hadendowi. In the 18th and 19th dynasties the kings called Thothmes and Seti and Rameses drove a wedge of exploitation into the Atbai, and the oldest map in the world, the Turin papyrus (circ. 1350 B.C.), probably shows the galleries of Deraheib mine in the Wadi Allagi, where there are still striking ruins. Many of the Northern Beja must have been enslaved and decimated in the Egyptian chain-gangs.

Egypt then fell sick, Nubia threw off the yoke and Beja history is dark until the advent of the enlightened Ptolemies, with their seafaring traditions and mercantile enterprise. They, too, wanted gold and reopened the mines. There is evidence that new sites were worked as far south as the Musmar-Sinkat line for over a century. They also wanted elephants for their armies and established a sort of remount depot and hunting base at Ptolemais Epitheras, the present Aqiq, near Tokar.

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King Ptolemy Philadelphus, sent down a Captain specially selected for his tact and knowledge of Beja ways. Thus came the first white man to the Beja Country. The Ptolemaic mariners crept from inlet to inlet and the classical geographers record names of a hundred tiny harbours on the Bisharin and Amarar coast, many of which can be identified to-day. But then, as now, the Beju were stubborn landlubbers. Although they graze their herds along 400 miles of shore and some of their camels even drink sea-water, they have always turned their backs on the Red Sea and "lifted their eyes unto the hills." With few exceptions, e.g., the tiny Kanirab sub-section of the Bisharin and the semi-Beja beach-combers of Aqiq, they do not fish nor do they possess boats, and where the Hijazi and Massawan mariners have Arabic names for every little headland and creek, there are only Beidawi names for the main features of the littoral. A seaplane tour of the Red Sea reefs and islands in 1932 found fishermen and pearl-divers from Arabia, Somaliland and Eritrea, but very few Beja.

During this period (300-200 B.C.) the Ptolemies probably foisted on the Beja the state religion of Isis and Serapis which flourished side by side with the tribal faiths. These latter seem to have included ancestor worship, astrology, and stone worship of some sort. But in spite of the persistent infiltration of Ptolemaic traders, sailors, hunters, miners, the Hellenistic culture of that dynasty appears to have had as little effect on the Beja as the Roman fashions of the late Meroitic Court, whose King Amon-renas carved his name on a stele in the time of Christ, as "Hereditary King of the Frontier of Egypt and of Atbai-land, prince of Kush and Napata." One wonders how many of the Bisharin in Wadi Allagi and on the slopes of Elba knew who Amon-renas was.

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Rome now appears on the scene, and the blunt generals and road engineers of Augustus and Hadrian were not so easy to evade or bribe as the luxury-loving Egyptians and the easy-going Greeks. But fortunately for the Beja south of the Egyptian frontier the Romans wanted neither gold nor elephants. Moreover the discovery of the Monsoon in A.D. 45 revolutionised communications with India and China. Red Sea Mariners abandoned the slow coastwise trips and sailed boldly across the high seas. The author of the *Periplus* (A.D. 80), a forerunner of the Red Sea Pilot, describes no harbours between Berenice, 350 miles north of Port Sudan, and Ptolemais (Aqiq), and although he lived at Berenice himself knew so little of the Beja that he merely divided them into Fish-eaters, Locust-eaters, and Calf-eaters, without knowing their collective name.

We can therefore surmise that Rome made contact only with the Egyptian Beja, then known as Blemmyes. The Southern (Sudanese) Beja, however, had their own troubles when the Axumite kingdom of Northern Abyssinia became aggressive. King Zoscales boasts, on a 1st century stele at Axum: "I overthrew Atalmo and *Beja* and all the people who camp round them, and I marched to Egypt." This is the first mention of the name Beja in history. Zoscales penetrated the Atbai but cannot have properly occupied the hill-country: the next shock fell on the Atbara Beja when King Aeizanes of Axum, a Christian convert, raided about A.D. 350 as far as the junction of the Atbara and the Nile against the "Nuba and Kasu," and defeated the Meroites as well as the Beja. He records names of places and Chiefs still known to the Bisharin. This was the last effort of the Axumites who then disappeared from Beja history.

Meanwhile the hardier Northern Beja were not suffering

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Rome gladly. The decay of Meroë and the building by the Romans of cisterns, forts, and roads in the desert west of Kosseir and Berenice excited the Blemmyes and the history of the 2nd, 3rd and 4th centuries A.D. is a story of continuous conflicts between these fierce nomads and Roman Egypt.

The civilised world is always astonished when the ruder races win a victory over a civilised power, e.g., the Abyssinians at Adowa, and the Riffis at Anual; so Gibbon writes: "The number of the Blemmyes, scattered between the Red Sea and the Island of Meroë was inconsiderable, their disposition unwarlike, their weapons rude and inoffensive. Yet these barbarians, whom antiquity, shocked with the deformity of their figure, has almost excluded from the human species, presumed to rank themselves among the enemies of Rome."

In 268 they actually subdued much of Upper Egypt and forced Rome to negotiate. A decade later they were driven out of Egypt but were soon back again and Diocletian weakly paid Danegeld to them so that they dominated the Assuan-Halfa reach for two more centuries. In 451 the Emperor Marcian finally defeated them and his treaty allowed the Beja priests to sacrifice to Isis at Philae and even to remove her image for certain festivals in the hills.

But Isis lost favour and Christianity was adopted by many Beja, by influence from Nubia and Abyssinia, about 600 or 700 A.D. and a Coptic Bishop called Barnabas was appointed to Aidhab to minister to sailors and merchants. Aidhab was a port near Kalaib whence alleged gold was exported. Christianity persisted among the Beja for at least 600 years, reaching its peak about 1150. A century later some were still Christians, some Moslems, and some pagan. A very few relics of both Christianity

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and paganism, e.g., bell-ringing at a birth, and the use of a camel as a scapegoat lingered on into Islam.

In A.D. 640 Amr Ibn El As, the General of the Caliph Omar, conquered Egypt. Among the Arabs of his army was the Rabya Tribe, and it was they who invaded the Northern Bisharin Country in about 850, and reopened the gold-mines. Relations between Moslem Arabs and Christian Beja were naturally hostile, and there was much fighting, but later there was intermarriage (just as the Juhaina Arab Emirs married Nubian women in the 14th century). An Islamisation followed, which, though only skin-deep at first, gained enough strength to induce the Beja to call their children by Moslem names (Mohammed, Hussein, etc.), and to bury their dead facing Mecca. This change took place about A.D. 1000-1300, and it is to this period that the coastal watch-towers of stone and coral, the fishtail tombs of Erkowit, and the vast necropolis of Maman (North of Kassala) are to be ascribed.

Most of the traditional heroes of the Beja, whose names appear in songs, perhaps also belong to this period, viz. : Shakaital who gave his name to a mountain near Sinkat, Husi and Yoihammi sung of by women on wedding days, and Owiho, at whose name the Beja brandish their weapons.

The historian, Yagūbi (A.D. 891), describes six separate Beja Kingdoms, at the time of the Arab invasion, between the Nile and the Red Sea as far South as Dahlak archipelago. He mentions the Amarar but no other clans that are now known. The Hadendowa and Bisharin had not then become separate tribes. The Northern Beja were friendly with the Moslems, but the Central tribes who extended to Khor Baraka were pagan, believed in magic and plucked out their eyelashes and front teeth: the Southernmost were Christians in Abyssinian territory and paid tribute to the King of Kings.

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Although there is no record of any paramount monarch, a Beja king called Mekshi who lived on the Atbara in 640 seems to have had a wide influence. The Amarar history tells us that he took an army with elephants and horses to stem the Moslem advance but was defeated in Dongola and killed. Mekshi's son preferred to treat with the Arabs and become a Moslem.

The Egyptian pilgrimage to Mecca were unable to embark at Suez owing to fear of the Crusaders at Akaba, so they marched overland to Aidhab and sailed thence to Jedda. So Aidhab sprang into fame and figures prominently on medieval maps. The Beja resisted enslavement by the Arabs and insisted on a share in the administration of Aidhab and its profits, and thus the town was subject to a curious condominium of an Egyptian Governor and a Beja Chief. Friction of course was frequent, and the Beja camelmen robbed and cheated the pilgrims.

In 1182 Renaud de Chatillon, Crusader and buccaneer, overlord of Transjordan, suddenly appeared in the harbour of Aidhab with a small fleet and 300 Franks, and sacked the town and massacred a pilgrim caravan inland. About this same time Chinese junks came to Aidhab to exchange porcelain for Beja products—especially, perhaps, the edible sea-slug (*Bêche de mer*), which is still exported from Port Sudan to Chifu, and possibly the pearls of Dongonab, which we know were fished for in 1250. Much celadon has been found at Aidhab of the Sung dynasty (960–1274). It is interesting to speculate what the Chinese and Fuzzies thought of each other, but they clearly made friends. The Chinese were no strangers to the Red Sea and had long obtained dates, cotton and sugar from the Arabs whom they called "*Ta-shi*." We do not know what they called the Beja.

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In 1426 Bars Bey, Sultan of Egypt, destroyed Aidhab, because its people intercepted wares destined for Mecca, and the centre of Beja gravity on the coast at once shifted to Suakin, where it remained until Port Sudan was founded early in this century.

Although no remains more than a century old exist at Suakin, tradition is insistent that it was a pre-Islamic city. We know there was a harbour in Ptolemaic and Roman times, and it was probably brought into prominence by Hadrami immigrants from Arabia before the Arab conquest of Egypt. Suakin was always as much or more Arabian than Beja and the Amarar History pertinently remarks that "most of the lineages of the tribes now living in Suakin return to tribes other than Beja."

Suakin rapidly grew in power. The first Indian ship from Calicut discharged its cargo there in 1422, and the port became such a flourishing entrepot that the Sultan Selim sent a Turkish fleet to occupy it in 1517. But the Turks did not penetrate inland and their Pashas soon became mere figureheads while the real masters of the Port were the Beja-ised Hadrami merchants and the local Artelga Sheikhs.

In 1540 the Portugese appeared on the scene and Donjohn de Castro, a captain in the fleet of Stephano de Gama which sailed from Goa to attack the Turks at Suez, describes Suakin in his *Red Sea Log* as "one of the richest cities of the East." The modern visitor walking through the silent sandy streets, under the carved balconies and shuttered windows, and noting the great dilapidated caravanserai and the sand-silted doorways of the tall coral houses, can only think of Suakin as a city of the dead. Gone is the bustle of the quays, the polyglot chatter of the Bazaar where Portuguese and Indians, Turks and

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Yemenis, Arabs and Beja, jostled and argued. Pariah dogs, aged beggars, a few shop-keepers and resident Government pensioners, veterans of the dervish wars, are almost the sole inhabitants of a city which, like Venice, "once held the gorgeous East in fee."

But to the Fuzzy the tragedy has had little meaning. Suakin was always a semi-foreign town. To it, as now, he merely brought for sale milk and ghee, skins and charcoal, then, his simple barter done, he went out to sleep on the coastal plain, or further into his own family glen in the foothills. Though the passing of Suakin has meant the loss of trade, the growth of the brand-new port of Port Sudan has given him an even bigger market for his wares, and manual labour.

It was during the early middle ages that most of the present Beja tribes took shape. The Amarar, we have seen, were an entity in 850 : The Bisharin, whose original home was the Elba district, the hinterland of Halaib, probably emerged as a tribe between 1000 and 1400, while the Hadendowa, if we can believe the scanty evidence of tradition, grew from a small band of 40 hillmen who, in about 1600, under the warrior, Wail Ali, beat off the attacks of a new and strange enemy, the black horsemen of Sennaar.

The alleged suzerainty of the Fung over the Southern Beja will always remain obscure. The Abdullab viceroys of the kings of Sennaar certainly ousted the Turks from Suakin for a space and shared the Suakin caravan dues with local Sheikhs. They also held Kassala and Goz Regeb on the Atbara and raiding parties probably penetrated the hills, but the central and northern Beja, strong in their newly-knit clans, resisted all infiltration into their main strongholds.

Arab influence was strong enough, during the four

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centuries after the Rabya invasion, to impose a veneer of Islam on the pagan Beja beliefs and to expel Christianity, and was responsible for the tremendous infusion of Arabic roots and Semitic grammatical forms in the Beidawi language: but the exhaustion of the mines, and the inhospitality of the country and of its stubborn inhabitants caused such Arabs as had not actually become merged in the Beja to move to the more kindly and settled region of the Nile.

So the stage was cleared for the final development of the Fuzzy as we know him. The new tribal alignments and the ebbing of foreign influence produced a sort of Beja renaissance and the first result seems to have been a general southern movement of expansion among the Bisharin and Hadendowa.

The main migration of Bisharin sections to the Atbara took place probably about 1770 and may have been connected with turbulent conditions on that river due to the break-up of the Fung power. Hamad Wad Omran Wad Isa, an ancestor of the present Bisharin Nazir, led an army from Ariab near Musmar to succour the Morghumab and then settled at Baaluk, where the ruling house have lived ever since, although it is only in recent years that the headship has been revived and the tribe re-federated. The Bisharin Country—if we omit tribal claims to a segment of the Eastern Desert of Egypt, thus stretches from the administrative frontier with Egypt, which touches the Red Sea north of Lat. 23° to the dreary plains of the Northern Butana in Lat. 16°, an area of nearly 50,000 square miles, about the joint size of the White and Blue Nile Provinces.

The Amarar tribe seems to have consolidated their position in the hills north of Ariab under Hamad Hassai, great-grandfather of the present Nazir, in the first half

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of the 19th century, and by inter-marriage with Bisharin and Hadendowa secured a footing on the plains and especially in the southern area between Khor Arab and the Atbara. This southward expansion thus drove a wedge between the Atbai and Atbara Bisharin and postponed any real reunion between the two Bisharin segments for some seventy years, besides creating a crop of grazing and cultivation disputes some of which are still unsolved. The movement has obviously been of great economic advantage to the Amara and enabled its population to increase proportionately.

The Hadendowa migration is more obscure and the traditions are controversial, but it seems clear that about the same time, i.e., 150 years ago, the Gash Delta was mainly occupied by the Beja Tribes of Halenga, Segolab, Melitkinab, etc., owing a shadowy allegiance, Bruce and Junker tell us, to the Fung King between 1770 and 1820. But here again the Fung-Abyssinian wars had their repercussions. Local unrest, added to the lure of the famous Gash corn and the excellent grazing of the Delta, attracted the growing power of the Hadendowa. They moved southwards and about 1840 Werne found Mohammed Din "the great sheikh of the Hadendowa," the most considerable chief in the Gash Delta, and incidentally wearing trousers of fine red cloth. The Delta was then a jungle of bush and grass and was frequented by lions until about 1910.

During the next 40 years the Hadendowa consolidated their power and frequently came into collision with the Turkish authorities over the payment of Tribute. They were regarded as treacherous barbarians. Werne says: "It seems as if Nature had stamped on the faces of these Haddenda the faithless character ascribed by all to their race."

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It was also about 1840 that the Baraka Delta at Tokar, which was formerly all forest and grass and grazed over by the Beni Amer and Hadendowa Tulinab, was cleared for dukhn cultivation by the Artega from Suakin, paying dues to the Beni Amer. They were followed by the Hassanab, Kumeilab and a few Shaiab, and later, at the beginning of this century, when cotton growing developed, by the Nurab, the bulk of the Shaiab and other immigrants.

We know little of the remote Atbai in the Turkish period, except for an account by M. Linant de Bellefondes who was commissioned by Mohammed Ali Pasha to lead an expedition in search of the ancient gold mines in 1831 and 1832. His book *L'Etbaye* was published in 1854 and his large map was the only source for cartographers till 1905. He rediscovered the amazing 10th century castles at Deraheib in the great Allagi wadi, and also a number of Roman and Arab gold-workings. Linant Bey's description of the Bisharin and the barren Atbai is interesting and when in 1929 a Nazir of the Bisharin was for the first time appointed over the hitherto disunited tribe, it was useful to find that his clan, the Hamdab, was regarded in Linant's time as the ruling house.

Other visitors to the Northern Beja in the 19th century were the famous naturalist and explorer, Georg Schweinfurth, who in 1864 spent six months between Qoseir and Suakin, and examined the peculiar flora of both the Elba hills and Erkowit : he gave the Bisharin a bad character, but pays tribute to the physical beauty of their young men : Von Heuglin, who in 1857 sailed down the Red Sea and gives us a long list of anchorages on the Sudan coast : J. T. Bent, who in 1896 found a Greek inscription in Wadi Gabeit and visited the mines and ruins in the foothills between Elba and Port Sudan.

The traveller who, whether by car or camel, visits

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to-day the lonely wells of Deraheib and Onib, which for some years sheltered one of the remotest police posts in Africa, or the little mines of Oyo and Ohaff, will find the Bisharin and their hills almost unchanged in the last century. Science can do little in a mountainous waste with an average rainfall of two inches.

Further south, a few travellers have left notes on the southern Amarar and Bisharin, the Hadendowa, Beni Amer and Halenga: John Burckhardt, who in 1814 went from Shendi to Taka (the old name of Kassala) and thence to Suakin and up the coast to Dongonab Bay: F. Werne, mentioned above, who saw much of the Beni Amer: F. L. James, who with six other Englishmen and a fox-terrier went from Suakin to Kassala, via Khor Langeb, in 1881, in the month that the Mahdi defeated the Governor of Fashoda.

Further south again, Sir Samuel and Lady Baker in 1861, after a march up the Atbara to Kassala, during which they saw the river come down in its summer spate on June 24, visited Kassala town and then went south to the Setit, later recording their adventures in the well-known book, *The Nile Tributaries of Abyssinia*.

The general impression we get from these travellers' accounts is one of comparative peace and prosperity, except in the far Atbai. There were, of course, the usual robberies and tribal scuffles, elevated by tribal raconteurs in our time to the status of Homeric combats, but the iron hand of the Turk prevented any major upheaval. Trade flourished both via the Nile and Red Sea ports. Jeddah frequently relied on Gash grain to save its citizens from famine. Apart from the ubiquitous Greek merchant there were many Europeans living in or passing through the country. An Englishman ran a flour mill in Kassala, a Belgian was met hunting big game, German botanists

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came to seek tropical flora, and less reputable adventurers to make their fortunes in ostrich feathers or ivory.

The Turks had forts and police posts up country and a telegraph line from Kassala to Suakin, and they tried to make a road for gun-carriages over the passes between Sinkat and the sea.

Between 1840 and 1870 some cotton was grown in the deltaic areas by the energy of Mumtaz Pasha, and machinery was installed at Kassala by Munzinger Pasha.

In spite of its spasmodic vigour, the Turco-Egyptian administration made no attempt, perhaps wisely, at close control of the Beja Tribes, and it is not surprising that the truculent Hadendowa were among the first to revolt in sympathy with the Mahdi under the leadership of the redoubtable Osman Digna. The immediate cause of the rebellion, however, was not religious fanaticism, but a breach of agreement by Government over an important camel contract. A despatch written by General Gordon at Assuan in February, 1884, reveals that two officials swindled the tribe out of a large sum of money due for transporting to Berber the reinforcements for the ill-fated expedition of Hicks Pasha. The revolt completely closed the Suakin-Berber road and was a vital factor in the subsequent disasters of the Egyptian troops. By the end of 1885 only the coast round Suakin remained in the Government's possession, and for the next few years the Hadendowa with some Amrar, under Osman Digna, kept the Government forces closely invested there. The various coastal engagements, some regular battles, some mere skirmishes, are vividly detailed in a number of books describing the Red Sea campaigns. During these early operations which followed the dramatic fall of Sinkat, defended vainly by its able Commander, the Cretan Tewfik Bey, the Hadendowa displayed the most remarkable

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tenacity and fearlessness. The names of El Teb and Macneil's Zeriba are still remembered to their credit, and the recently-erected obelisk at Tamai and Kipling's well-known poem, *Fuzzy-Wuzzy*, testify to the strong impression they made on the regular British troops.

However, the natural independence of the tribe, coupled with a wholesome respect for British guns and rifles, caused a split in its ranks, which was aggravated by Osman's brutalities, and it is doubtful whether he was ever able to mobilise more than half its numbers. Moreover, years of famine and the extortions of the Baggara dervishes sent from Khartoum to garrison Kassala and strengthen Osman's hand gradually lessened the tribesmen's ardour, and many escaped and took to the hills. Tokar was recaptured by Government troops in 1891 and Kassala occupied by the Italians in 1894. Osman Digna withdrew to Adarama on the river Atbara, taking some reluctant Hadendowa sheikhs with him, but by this time the tribe as a whole had had enough, and as an active danger had ceased to exist. Thousands had been killed or died of famine; their flocks and herds had been decimated and the tribal units scattered.

The Mahdia passed the Bisharin over lightly, especially in the Atbai. There were none of those sharp divisions of allegiance, which caused such lasting splits in the Amarar and Hadendowa. There was no strong feeling for or against the Mahdis cause. After the fall of Khartoum, the establishment of a Mahdist force at Berber compelled the inland sections to accept the régime, and the Um Nagi clans were partially controlled by dervish posts at Kiau, Abu Dueim, and Ariab. The coastal sections, Shantirab and Hamedorab, held aloof, being safe from raids and liable to be coerced or protected by British warships from Suakin. Sporadic skirmishes with Dervish

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outposts occurred at Meisa well, Jebel Deirurba, and Wadi Nesari, resulting in the latter's discomfiture, which they only partially retrieved by a successful raid on Halaib port and village in 1889. The Atbara Bisharin mostly joined the Dervishes, being tied to the river for their economic needs.

The Mahdia began badly for the Amarar by the cruel murder of their Nazir, Hamad Mahmud, by Osman Digna at Tiselha in 1885. Many fled northward in fear and disgust, and most were friendly to Government in the fighting of the '80s and '90s, but numbers of the Abdelrahmanb, Sindereit, and Minniab clans sided with Osman Digna.

The Beni Amer during the Mahdia stretched from Tokar to Massawa with a stronghold at Hamashaeit, north-east of Agordat in Eritrea. The sections of the tribe around Tokar came in closest contact with the dervishes and the sections of Beit Mal, Sinkatkinab, Khasa, and Lebbat, apparently fought most against them, but doubtless many individual Beni Amer joined the Mahdist cause to save their skins. On more than one occasion important sheikhs met in conference at Aqiq and elsewhere during the vicissitudes of the campaign to affirm their loyalty to the Government and to offer help to the authorities at Suakin.

After the reoccupation of the Sudan by the Anglo-Egyptian forces, the problems of Beja administration with which the new Government was faced were much the same as elsewhere in the Northern Provinces, and the small band of political officers were mainly engaged in keeping the peace, assessing and collecting tribal taxes, and arranging for the settlement of inter-tribal disputes over boundaries, cultivation, and grazing. No real administrative advance was possible until the problems of

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tribal leadership and unity were solved, and until the district officers could make their influence felt and win the trust and friendship of the Fuzzy by continual tours and camp-fire conversations. For a number of years the natural aloofness of the Beja, who did not trouble to distinguish between Turk and Englishman, the great distances and bad communications hampered liaison. Bit by bit, however, these difficulties have been largely overcome.

Owing to administrative exigencies, the Beja tribes were at first partitioned between three Provinces: Berber, Red Sea, and Kassala. Tribal unity and inter-tribal amity naturally suffered. For many years public security was precarious, co-operation with Government negligible, and tax-collection a nightmare. Not long after the War the Berber units were transferred to the Red Sea Province, and in January, 1930, the Red Sea Province itself, less the Port Sudan and Suakin enclave, was amalgamated with Kassala Province. After a short period all the Beja tribes were placed under an independent Nomad administration based on Sinkat, to facilitate study of their future.

The four main tribes, Hadendowa, Beni Amer, Amarar, and Bisharin have in the last two decades gradually been each united under one tribal head selected from the traditional ruling family. The present Nazirs, all, fortunately, able men, were appointed in 1914, 1915, 1927, and 1929 respectively.

In 1928 the Government policy of indirect administration was given a stimulus by the setting up of formal Native Courts with powers of imprisonment and fine. In 1930 and 1931 the system was extended to the cosmopolitan canal villages of the Gash Delta irrigation scheme. Meanwhile, at Tokar, a thriving cotton-growing centre with a sophisticated population which has produced over

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a million pounds sterling in revenue to the Government since the reoccupation, a semi-mercantile, semi-sheikhly Municipal body of Beja notables was appointed which has had an astonishing success both judicially and administratively. These courts and councils have shown that the Beja tribes can, on demand, throw up individual leaders, whose force of personality can impose on the mass of tribesmen an enlightened policy, whether relating to tribal justice, economics, health or education.

An increasing number of Beja are bilingual, i.e., speak Arabic as well as Beidawi or Khasa, and the growth of tribal schools is slowly raising the co-efficient of intelligence, besides providing a reservoir of literate youths for technicians, clerks, dispensers, agriculturalists, etc.

The economics of the Beja are necessarily tied to factors of geography and rainfall. The latter ranges from 2 inches in the arid north to 13 inches at Kassala. Consequently, in the barren foothills and plains of the Atbai, grazing is sparse and cultivation a gamble. The shortage of grass limits stock to tree-grazing camels and goats. Graminivorous sheep and cattle cannot survive far north of Lat. 19°. The Atbai Bisharin, who total about 11,000, have to sell large numbers of camels in the Egyptian markets to buy their grain, of which in good years they only grow 3/5th of their requirements. Charcoal, tanning, and labour at the gold-mines bring in perhaps £2,000 annually.

The majority of the tribe live a hand-to-mouth life and are perpetually under-nourished, but they are a hardy race of attractive appearance and philosophic mind.

The Atbara Bisharin, living an easier life on a river bank, are better fed and more sophisticated. They number about 4,500.

The Amarar have a more compact area of under 10,000 square miles, one-fifth of the vast Bisharin country, but

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have broader cultivable tracts. So they can adjust internally inequalities of food supply. Some 2,500 live and work permanently in Port Sudan, and the milk demands of this large town, coupled with labour on the quays, provide them with a steady income. Their total population exceeds 40,000, divided into 12 sections (*bedanas*) and some 80 sub-sections (*hissas*). They own about 30,000 camels, a few hundred cattle, and 120,000 sheep and goats. They also are a fine upstanding race, sturdier than the Bisharin but no less handsome. At wrestling, jumping, and other sports, their young warriors are a joy to the eye.

The Hadendowa population is now put at 60,000 souls divided into 40 *bedanas* and a host of minor sheikhships. Their animals total 20,000 camels, 30,000 cattle, and some 160,000 sheep and goats. Their northern clans lead the same hardy life in the hills and glens as the Amara and Bisharin, but they have large grain areas in the Wadis west of Sinkat, the Tibilol-Odi plains and in the rich Gash Delta. They also derive a useful income which has reached £16,000 in one year from the export of vegetable ivory from the dom-palm forests in their central area. This trade began with the building of the Kassala railway. They also sell senna, mecca, colocynth, milk, hides, charcoal, palm-fibre matting, and ghee.

The Hadendowa are the biggest tribe in the mixed population of the Gash Delta, and play a leading part in the cotton-growing area, and their economic life has been revolutionised thereby. Until 1925 their tribal wealth consisted mainly in animals and grain, and such cash as they won from cotton-picking at Tokar and camel-porterage. Before the Kassala railway was constructed, some 15,000 camel loads of goods were carried yearly

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between Suakin, Tokar, and Kassala. Their tribute 25 years ago was about £1,000, i.e., a goat per adult male a year. Then came the Great War. Animals were saleable at fabulous prices and grain exportable. The economic equilibrium was upset, but in the tribe's favour. When the world-wide reaction set in and prices declined, they suffered badly, and the story of 1919-1926 is one of perpetual taxation difficulty, until their tribute was temporarily stabilised at £3,500.

In April, 1924, the Kassala railway was completed, and in the same year the Kassala Cotton Company was formed and given a concession in the Gash Delta. Economic and other difficulties caused the Government later to take over the management of the cotton scheme and the Company moved to the Gezira. Five main canals and a number of "*misgas*" (irrigation channels) were dug, and a large area (40,000 acres in 1933) flooded yearly by the Gash spate, on which first-class Sakel cotton has been grown as well as a welcome quota of grain. Tribal well-centres for the cattle are also soaked and the canalised area with its roads, villages, markets, telephone system, dispensaries, and school, is now an integral part of the social organisation of the Southern Beja.

The Beni Amer, living partly in Tokar district, partly near Kassala and along the Eritrean frontier have also consolidated their tribal structure under their able young Nazir, and maintain friendly intercourse with their kinsmen in Italian territory. Their history has been less eventful than that of the other Beja and they are a more peaceable folk with more stable economics.

To their District Commissioners the Beja, especially the hillmen, who are still as wild as hawks, have often been the cause of depression, if not of despair. But thirty-five years of peace and benevolent administration

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have worked wonders. When the Fuzzy's outer shell of dourness and taciturnity is penetrated, the patient official—doctor, agricultural inspector or political officer—will find a keen sense of humour, a rustic courtesy and honesty of speech, and a capacity for warm friendships. The Beja tribesmen share the rugged fascination of their mountains, and no one can leave the service of this handsome and stubborn race without regret.

Further reference on this subject can be made to an article by G. E. R. Sanders published in *Sudan Notes and Records*, Vol. XVI, Part 2, 1933, and to a paper by Professor C. G. Seligman, R. Anthropological Institute Journal, Vol. XLII, 1913 on the *Hamitic Problem in the Sudan*. Also *Sudan Notes and Records*, Vol. XIII for the Beni Amer tribe.

SOME ASPECTS OF THE NORTHERN PROVINCE

By W. D. C. L. PURVES

Sudan Political Service

(Northern Province includes the old provinces of
Halfa, Dongola, and Berber.)

Geography and Climate

HALFA District extends from the Egyptian frontier to the third Cataract: Dongola and Merowë Districts lie between the third and fourth Cataracts, and Berber and Southern Districts between the fourth and sixth or Shabluka Cataract, forty miles north of Khartoum. The inhabitants of Halfa, Dongola, Merowë, and Berber, depend almost entirely on the Nile for their livelihood. Their homes and lands lie along the Nile and they cling to them with a tenacity unequalled perhaps by any other people in the world. For a large part of its course through the northern part of Berber and through most of Halfa the Nile is shut in by barren rocky hills, beyond which there is nothing but bare uninhabited desert.

In the southern parts of Merowë and of Southern Districts, there are considerable numbers of nomads who wander over the deserts with their herds of camels, sheep and cattle in search of grazing. In the summer many of them are compelled to come down to the Nile for water, so that the Nile may truly be said to be the life-blood of the inhabitants of this Province. From it they draw

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water not only for themselves and their animals, but also to irrigate their lands. A high or low flood may mean to them the difference between prosperity and poverty, between plenty and famine. Apart from the nomads they are indifferent to the rainfall, which is scarcely measurable in Dongola and Halfa. In fact, rain in these Districts is a curse rather than a blessing, owing to the damage it does to the date-crop and to buildings.

The climate is not unhealthy despite extremes of heat and cold. Temperatures between 115° and 120° Fahrenheit are frequent in summer, and in winter temperatures of 60° to 70° by day are sometimes followed by a drop to freezing-point at night. On the other hand, the dry, dusty air creates a condition favourable to lung and eye diseases. Malaria and bilharzia are also common.

The province is rich in history, and considering that invading armies have marched up the Nile valley since the earliest times, destroying and defacing human monuments on their way, those that remain are in a wonderful state of preservation. It is not possible here to do more than enumerate the principal sites. In the north of Halfa there are Faras, Buhen and Semna and the beautiful temple of Sulb between Abri and Delgo. In the old Dongola Province the three temples of Kawa were excavated as recently as 1931 by the late Professor Griffiths, while Professor Reisner was mainly responsible for the excavation of the pyramidal graves of the Ethiopian kings at Kuru, Barkal and Nuri, and the temple and town of Napata near Merowë. Old Dongola, once the capital of ancient and later of Christian Nubia, is to-day completely ruined and deserted. Little excavation has been done there. Southern District contains the site of the ancient capital of Meroë at Bagarawia near Kabushia, the temples of Massawarat east of Shendi and of Naga to the south-

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east. Much has already been done by eminent archæologists, but there is still a large field both for the expert and the amateur not only in Nubia but further south, which awaits only time and money to deliver up its treasures.

In Arab times, the chief towns were Berber, the largest town in the Northern Sudan, once the market of the north and the starting point for caravans for Egypt and the Red Sea, to-day but a shadow of its past self, el Damer, the seat of religious learning and piety, Shendi and Metem-meh, the principal towns of the powerful Jaalin tribe. To-day all these towns have lost much of their former importance owing to the centralisation of the export trade of the Sudan in Khartoum, Omdurman and Port Sudan and to the diversion of its trade routes from the Nile Valley to the Red Sea. The only new towns of any importance that have been built since the re-occupation of the Sudan are Atbara, the Headquarters of the Sudan Railways and the junction of the lines from Wadi Halfa and Port Sudan, Wadi Halfa, the frontier town and northern gateway of the Sudan, and Merowë, the headquarters of the old Dongola Province, famous for its fruit-gardens. In the two former are to be found many of the conveniences of modern civilisation in sharp contrast to the primitive conditions of the older towns.

Inhabitants—Sedentaries

In the whole of Halfa District and in Dongola as far south as Debba where the Nile turns north again, the people are Nubians. The earliest inhabitants of northern Nubia were contemporaries of the pre-dynastic Egyptians. Both buried their dead in the same way and in cultural matters had marked similarities. It is probable that in the earliest period of all they were devoid of all negro characteristics. Later, about the time of the third dynasty, negro types began to settle in Nubia as far

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north as Aswan, and from then onwards the population that grew up was a mixture of early Nubian and dynastic Egyptian with an ever-increasing negro element. See MacMichael *History of the Arabs in the Sudan*. Despite a later admixture of Arab blood they still keep, particularly in Halfa District, the short squat nose and thick lips which are a legacy of this negro element. They have also retained their own language, and for this reason both they and the inhabitants of the whole of the Halfa-Aswan reach are known to the Arabic-speaking inhabitants of Egypt and the Sudan as Berabra ("Berberines"). With the spread of education and their wanderings abroad in search of work, most of the men speak Arabic, but few of the women outside the towns speak more than a few words of it. Inter-marriage between Nubians and Arabs is comparatively rare. By character, the Nubians are unwarlike and seldom seek service in the Army or Police. Despite their wanderings they are extremely conservative, with an intense love for the barren inhospitable land of their birth. The Danagla, those inhabitants of Dongola District who live between the Halfa boundary and Debba, while retaining the language and certain characteristics of the Nubians, are distinct from them in possessing less negro and more Arab facial characteristics. They are, in fact, essentially similar, except in language, to the Jaalin group. Curiously enough their language is distinct from that of Mahas, Sukkot and Halfa, but is the same as that of the Kenuz who live north of the Egyptian boundary. Without being in any way warlike by nature, they are not averse to serving with the Police, but they are chiefly to be found outside Dongola as small traders, servants and employees.

The important tribes in Merowē District upstream of the Danagla are the Fung round Debba, the Bedeiria

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round their original homes at Korti and Ambigol and the Shaigia between Korti and the fourth Cataract. The Fung are descendants of the former Fung conquerors, who, coming from the south, took possession of the Nile valley as far north as Dongola in the seventeenth century. They no longer retain the Fung dialect nor any peculiarly Fung characteristics. Many of them have adopted the Berberine dialect of the Danagla, but the majority speak Arabic. They are good cultivators. The Bedeiria have largely inter-married with other Arabic speaking tribes and are chiefly engaged in trade and agriculture.

The Shaigia though too scattered to be of importance tribally are influential by virtue of their superior individuality. They have maintained their reputation as good fighters, generally on the side of the Government of the day. At the present time they supply a large number of officers and men to the Sudan Defence Force, the Police forces of the various Provinces, the Egyptian Frontiers Administration and even to the Gendarmerie of Palestine and Transjordan. They are more addicted to drink than other Arab tribes and are apt to be truculent as a result. Despite this, they are personally attractive. Their women are remarkable for their beauty and their freedom.

Upstream of the Shaigia in Berber District live the Monassir, the Robatab round Abu Hamed and the Mirafab round Berber and as far south as the junction of the Atbara with the Nile. The Monassir are partly nomadic and own an excellent breed of riding camel. They have a not altogether undeserved reputation for camel theft and smuggling, possibly due to the difficulty of extracting a bare livelihood from their rocky lands. The Robatab formerly largely nomadic are now mostly peaceable cultivators and produce some of the best dates grown in the Sudan. The Mirafab, the original owners of Berber,

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are described by Burckhardt as "forgetting every divine and human law in their pursuit of gain." They are certainly greedy, cantankerous and litigious, but with the development of a successful Native Administration in Berber District there are signs of the growth of a more civic spirit.

From the Atbara to the Shabluka extends the important Jaalin tribe with its numerous sub-sections, several of which are nomadic. Having been large slave-owners in the past they are easy-going and as cultivators lack the energy of the Nubians. Outside Northern Province they are generally to be found engaged in trade, agriculture or Government employment. While less military by nature than the Shaigia many enlist in the Army or the Police. They are a well-mannered, cultivated people among whom are found holy men with a considerable reputation for learning.

The most notable characteristic of the majority of the northern riverain tribes is their readiness to travel in search of work together with an intense love of home. As a result of their older civilization and of the influence of outside contacts they have a higher standard of intelligence than most other tribes. It is probably not an exaggeration to say that over seventy per cent of the clerical posts in Government service and in commercial firms throughout the Sudan are filled by natives of the northern riverain Provinces. Another noteworthy characteristic, particularly of the Nubians of Halfa District, is their communal and patriotic spirit. As an example, four new dispensaries were built there during 1933 by the people themselves, and in one village, Debeira, L.E.80 was subscribed for the purpose by absentees working in Egypt. Another and even more striking example of this spirit was the voluntary collection some years ago of

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over L.E.60 to pay off the arrears of taxes of the indigent in the Sukkot Sub-District of Halfa. This communal spirit is by no means an Arab characteristic, the Arab being by nature individual rather than social. Despite this virtue, the Nubians are cantankerous and quarrelsome over small matters, particularly over land, however valueless. The scarcity of cultivable land has produced a veritable land-hunger, which is often most unneighbourly. At the same time there is a very remarkable absence of theft and a readiness to work unusual in the Sudan, both of which may be attributed to the absence of a slave class, particularly in Dongola and Halfa.

Nomads

The most important of the nomadic or semi-nomadic tribes are the Kabbabish in Dongola and Meroë, the Gerrarish partly in Dongola and partly in Halfa, and the Hassania and Ababda in Southern and Berha Districts. Except for the Ababda, these tribes do not take kindly to military service, although many of the Kabbabish are to be found in the Police forces of the Northern Province. The Ababda at the time of the reconquest of the Sudan provided the bulk of the irregular forces which served under Lord Kitchener. Since then, besides serving as guides and trackers in the Palestine campaign against the Turks, they have provided the Sudan Government with a number of officers, mamurs and mounted police.

Occupations

While the nomads are chiefly dependent on the camel-carrying trade, in which, owing to the high freight charges, they are still able to compete successfully with the railway and the motor car, ninety per cent of the sedentaries are engaged in agriculture in which they have reached a relatively high standard through long experience, natural

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intelligence and readiness to work. In a country where rain is scarce, the Nile is the sole source of irrigation, the simplest form being provided by its annual fall after the flood has reached its peak during the first half of September. As the river gradually recedes, the slopes of the banks and islands in the bed of the river, are sown with millet, maize, wheat, barley, lubia, lupins and other crops. Once sown they receive no further watering. In the early spring the sand banks are sown with water-melons.

Another method of irrigation is the inundation of the former bed of the Nile in places where the river has cut itself a new channel. In order to inundate these natural basins, canals have to be cut some distance upstream to let in the flood as it rises. To regulate the inundation of the basin and to ensure the irrigation of as large an area as possible, banks and regulators are constructed, and a drain, provided with a regulator, is dug at the downstream end of the basin to drain off the water and prevent the land becoming waterlogged. This form of irrigation is common in Egypt where it is being rapidly replaced by perennial irrigation giving vastly improved results. In the Sudan it is also in use at Tokar and Kassala where the flood water of the Khor Baraka and the Gash is controlled in much the same way.

In Halfa there are only two small basins at Faras and Debeira. In Dongola much money was expended before and during the War on basin works all along the Nile, but except for the Kerma basin of some 70,000 feddans which produces fine crops of wheat, beans and peas, none of the others do much more than provide the local inhabitants with a much-needed supply of grazing for their animals and with wood for domestic purposes. Southern District has several basins, the biggest being Wad Hamid,

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but they are little more successful than the Dongola basins in producing food crops.

The above two methods of irrigation, though important in providing fodder, are insufficient and too uncertain to provide the food crops required by the local population. Artificial irrigation in some form is a necessity. The Sagia (Persian water wheel) and the Shaduf are the methods principally employed. Nine-tenths of the population spend their lives in eking out a bare existence by these cumbersome, unpractical and inefficient methods of irrigation. Owing to the scarcity of land sufficiently close to the river to be irrigated by these means, it is not uncommon for a plot to be cropped twice or even three times a year. This naturally tends to exhaust the soil particularly as ploughing is very rare and artificial manures are not used. Fortunately the strong sun and the red silt brought down by the flood counteract the tendency to exhaustion.

As the motive power of the Sagia is the bull and of the Shaduf is man, the extent of cultivation that can be irrigated by these means is limited not only by the land available but also by man—and bull-power. In years of low flood when fodder is scarce, the bulls are so weak that they cannot turn the Sagia, and a sudden outbreak of rinderpest may at any time destroy hundreds of cattle and reduce comparatively prosperous areas to a state of starvation. The obvious cure is the introduction of a simple, efficient, and up-to-date mechanical means of raising water. Where the Government has erected pumps and supervises the scheme, the results have been encouraging, particularly in Dongola and Merowë Districts, where exceptional crops of American cotton, yielding as much as eight kantars a feddan, and of wheat, maize and dura have been grown at Nuri, Gureir, Kulud and Ghaba. In Berber and Southern Districts, chiefly owing to pests and

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the richer soil which produces an excess of grass and weeds, the schemes at Bouga, Mikeilab, Kitiab and Gandettu have been less successful. The same thing is true of the private pumpingschemes in the Provinces. Whereas in Berber, owing to the high cost of fuel and poor crops, private pump owners find difficulty in meeting their expenses, in Dongola they are reasonably prosperous. In Berber Province there were 22 private pumps working in 1933, and in Dongola Province 21. In Halfa there were 13, all of them using oil fuel owing to the scarcity of wood and the high cost of coal.

Here again the co-operative spirit is in evidence, the majority of the pumps being held in partnership and the water paid for by land-owners either in kind or in cash when the crop is harvested. These schemes are still in their infancy, but it is safe to predict that a pump worked by a Diesel engine or some other reasonably simple mechanical means of raising water must in time replace the inefficient and antiquated Sagia and Shaduf.

The whole area north of Berber being practically rainless is particularly suited to the production of dates. There are several excellent varieties of which Barakawi, Gondeila, Bartamoda, Kulma, Gargoda, Mishrigi, Sukkoti and Jau are the best known. Once a date shoot has taken, the native rarely takes the trouble to water or tend it regularly. That the yield can be doubled by regular watering and systematic tending has been proved by Colonel E. S. Jackson on his model date-farm in old Dongola Province. Owing to the difficulties of transport and of packing soft dates, practically all the dates are sun-dried after picking. Unfortunately, hard dates have so far found no market in Europe, so that date cultivation is dependent on the internal demand and to an increasing extent on export to Egypt and Arabia.

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Successful experiments have been made particularly in Merowë in fruit and vegetable growing. Excellent grape-fruit, oranges, tangerines, lemons, limes, mangoes, grapes, bananas, guavas, and European vegetables of all kinds are grown not only in Government gardens but to an increasing extent by enterprising natives in Merowë and Halfa. As at present the supply is insufficient to meet even the local demand for fresh fruit, there is room for the profitable expansion of this industry.

After agriculture, the chief occupation of the inhabitants is petty trade. The aim of every servant and of every artisan seems to be to save enough capital to open a small shop, and the number of petty traders is in excess of the requirements of the population. One of the features of Dongola and Merowë is their prosperous and well-run markets.

Although fees on the produce and animals sold are collected by Government market-clerks, the markets are extremely popular. Proposals that they should be taken over and managed by local native authorities have not been well received so far, even by these authorities, but it is an obvious step in the direction of devolution.

There are, regrettably, few handicrafts—the making of damur (native cotton cloth), mats, baskets, pottery, carpentry, leather and silver-work being the most flourishing. Efforts are being made to preserve and stimulate native handicrafts, but the importation of cheaper and more attractive articles from abroad will probably prove too strong in the long run, when the price of dates and cotton has recovered sufficiently to enable the native to buy the imported article.

The extent to which the economic life has been influenced by modern methods of communication is very evident. They have enabled the young men to seek their living

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abroad, to send back part of their earnings to their families at home and to visit them at regular intervals. They have also reduced the chances of famine and facilitated the export of native produce, particularly raw cotton and dates. Unfortunately low prices have made it impossible to pay high freights and at the same time compete in foreign markets. Merchants have therefore fallen back on the slower but infinitely cheaper means of transport afforded by the camel and the native sailing boat. Hence it is that the caravan routes between Egypt and the Sudan, between Korti and Metemmeh and even between Dongola and Darfur and Kordofan are still in use. The ancient slave routes, the Arbain road between Darfur and Assiut and the Berber-Suakin road, are scarcely used now for the transport of merchandise, but the desert roads between Abu Hamed and Korosko and those further to the east are still largely used for taking consignments of camels down to Egypt for sale to the Fellahin as pack-animals or to the butchers for slaughter.

Education

Intercourse with the outer world has given the inhabitants a keen appreciation of, and desire for, the benefits of education. In the village “*Khalwas*” (Koranic Schools), the “*Kuttabs*” (elementary vernacular schools) and the Intermediate or grammar schools, there is a keenness for education both among the pupils and their parents, which is really remarkable. The demand for girls’ education is also encouraging, for without it, it is difficult to believe that there can be any real progress. It may be only the realisation on the part of the parents of the financial benefits which education brings with it in a country where until recently literacy was rare, but whatever be the reason, the demand has to be met. The standard of education in the lowest form of educational institution, the village

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"*Khalwa*" which until recently was entirely native and unsupervised but now includes along with the Koran the teaching of reading, writing, general knowledge and arithmetic, is considerably higher than in similar schools in other Provinces and deserves every encouragement. Small grants of money are made to the teachers, after they have undergone a short course of pedagogy under a trained teacher, the "*Khalwas*" are frequently visited not only by trained inspectors from the Education Department but also by administrative officials, refresher courses are held for teachers who require it, and every effort is made not only to improve the teaching, but also to make the native authorities and the villagers themselves take a keener interest and pride in their own village schools. The "*Khalwa*" has the great advantage over other schools of giving its pupils the rudiments of education sufficient to enable them to increase their knowledge if they wish, without unsettling these who remain at home to cultivate or engage in other manual pursuits.

In the Elementary Vernacular Schools an improved and extended form of education is given in the vernacular. The masters are trained at the teachers' training school in Khartoum; the whole standard of teaching is very much better than in the "*Khalwa*" and at the end of the four years' course the better boys are ready to proceed to an Intermediate School, if their parents wish them to adopt a clerical career. At present, the number of Elementary Vernacular Schools is insufficient to cope with more than ten per cent of the boys of a suitable age: for the rest the "*Khalwa*" must suffice. Efforts are being made to improve elementary education and at the same time to prevent its having an unsettling effect on the majority of the pupils, who will not be able to go on to a Primary School, of which there are only three in

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the Northern Province at Wadi Halfa, Berber and Atbara. There, English forms an important part of the curriculum, and at the end of the course, also of four years, the boys are ready either to go on to the Gordon College or to take up any minor clerical posts that offer. Few, if any, are content to return to agriculture after attending an Intermediate School. Herein lies the danger, but it is difficult to refuse to accept a boy in the Intermediate School if he has successfully completed his elementary course and his parents are ready to pay the fees.

Devolution

The progress of Native Administration has been slower than in the Provinces to the east and west of the Nile, the chief cause being the loss of tribal spirit due to more direct methods of administration under the old Turkish and even under the present Government. Hence devolution has developed on village rather than on tribal lines.

On the judicial side it was not until the introduction of the Village Courts Ordinance in 1925 that use was officially made of the village council of elders to deal with petty criminal and civil cases. Progress was at first slow, owing to a natural and understandable mistrust of the impartiality of the judgments of native Courts, but now that the advantages of this method of settling disputes are realised, the Courts have gained rapidly in popularity and prestige. The right of appeal is maintained but, considering the litigious nature of the riverain people, it is surprisingly seldom made use of. As a result of the progress made, the powers of the Village Courts have been increased and their jurisdiction extended. District Courts have been instituted in Shendi, Berber, and Halfa, under the presidency of leading natives and are using their increased powers, including imprisonment, with moderation and efficiency. On the administrative side, progress

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includes not only the collection of taxes but their assessment by native boards. The assessment of rain-crops in Berber and Shendi, the quinquennial date census in Dongola and Halfa and the assessment of flood and basin crops in Dongola have for several years been satisfactorily carried out by boards of Sheikhs with a minimum of supervision. In Halfa the allotment of building land in villages has now been delegated to the Sheikhs and transactions in date trees are registered by Presidents of Village Courts. Cases concerning date trees are settled by the Village Courts throughout the Province. It is hoped that eventually the same procedure may be possible with regard to registered agricultural land.

Success or failure in these experiments will depend on the honesty and impartiality of the native agencies employed. While the British administrator has no axe to grind, it is difficult for a native court not to be biassed in its judgments by its close personal knowledge of, and interest in, the case before it. Pressure will not improbably have been brought to bear on some of the members to influence their decision. For this reason judicial powers have so far not been granted to any individual Sheikh sitting alone, with one single exception in Dongola Province. The Council affords at least a measure of protection against personal prejudice.

The Future

No great material prosperity is to be expected where natural conditions are so unfavourable. Good agricultural land is too scarce, the air is too dry and the summer heat too intense for any great development in agriculture to be anticipated. Much can be done to increase the area under cultivation by finding a simple, fool-proof, mechanical means of raising water, and date cultivation

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and fruit growing seem to offer distinct possibilities of development. But even so, agriculture in this Province can do little more than provide a meagre livelihood for a small population, leaving little over for the purchase of the luxuries of life. As long as the inhabitants cling to their homes, the chief value of the Northern Province to the Sudan will continue to be the supply of man-power. Individual families will no doubt move south to the more fertile lands of the Gezira, where they will settle and win a certain degree of prosperity. But the bulk of the population will remain as they are, depending on agriculture for their bare necessities, supplemented by remittances from outside for the purchase of such luxuries as they can afford. The improvement of material conditions, health and education and the maintenance of the present security of life and property will help to produce a healthier, better-educated and more contented population, willing to seek their fortunes outside their homes and to supply Government with the bulk of its civil and military requirements of men.

What position they will take in any advanced form of Native Administration it is difficult to prophesy, but their individuality, intelligence and enterprise justify the supposition that it will be of considerable importance.

Note.—Further information on the Shaigia may be found in a short history of the tribe by W. Nicholls, obtainable at the Civil Secretary's Office, Khartoum.

DEVOLUTIONARY PRINCIPLES IN NATIVE ADMINISTRATION

By J. A. DE C. HAMILTON, M.C.

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GOVERNMENT by devolution is, as its name implies, one of decentralised control ; of leaving administration as far as possible in the hands of native authorities wherever they exist and by guidance, advice or correction, where required, of assimilating traditional usage to the requirements of equity and good government. Devolution does not mean the abdication in any respect by Government of its right to govern, which must, of its nature, remain absolute. Its essence is that Government refrains from interfering in non-essentials and allows native agency to perform as many of the simple functions of administration as it can safely manage.

The case for this form of administration rests upon two common-sense principles. The first is that government should be as light as possible, i.e., that it should disturb the everyday life of the natives as little as possible. The second relates to expediency. If Government is to undertake the performance of every function and the direct control of every individual, its machinery must grow in a progressive manner until the expense becomes prohibitive.

There is, moreover, an additional factor operating very forcibly in the present century.

Devolutionary Principles in Native Administration

When native races were first administered by the white, the latter had no doubt in their own minds as to the justice of their rule and the right by which they governed. Further, they held that their own civilisation was so immeasurably superior to that of their subjects that they had no scruples about imposing, by force if necessary, their own customs and creeds. Developments and questionings which time has produced have, however, caused a doubt in the convictions of many as to the soundness of these postulates.

Moreover, it had been apparent for some years to many sympathetic administrators, that there was much in native customs and mode of life which was worth supporting and that only by allowing a large measure of freeplay to these could the people's natural zest for life be maintained. This new line of thought was greatly fortified by the studies of the anthropologists.

The faith of the white races in direct rule thus began to suffer both from a weakening in those races of their faith in the applicability of their own civilisation and simultaneously from a growing conviction that there was much in native life worthy of preservation and development.

A realisation of the interdependence of the modern world, the growth of communications and the annihilation of distance render impracticable any idea of leaving the "native" races to work out their own salvation, uncontaminated by contact with the "whites." Africans and Asiatics and Europeans are now relatively close neighbours and the present task of governments such as that of the Sudan lies in co-ordinating the interactions of the two parties and in finding a solution to the many problems arising from their contact. It is for the solution of these problems that the devolutionary principle seems

Devolutionary Principles in Native Administration

to offer the greatest hope, based as it is on an understanding of the people and a realistic conception of the facts of present world politics.

Whether there is white control or not, every people must have some form of machinery for dealing with their everyday affairs. They have cases to be settled, dues to collect, and they evolve customs to deal with their everyday problems. The task of the administrator is to study these customs, and see how much of the old machinery can be utilised for present day purposes. He will find much that is evil and barbarous ; on the other hand, much that is admirably suited to the country and the people's mode of life. The former he will have to check, the latter, if he is wise, he will allow to function as before.

In this connection it may be noted that it is not necessarily desirable at once to regularise unobjectionable customs by giving them legal sanction. Such regularisation may often result in the stabilisation of customs which might evolve into something better twenty years hence. The sanction of custom itself permits of greater elasticity.

If the natives' own indigenous and simple forms of government are utilised it may well be that a very large proportion of the administrative needs of an area can be met locally without the importation of any bureaucratic machinery, expense will be reduced, the *amour-propre* of the people will be maintained and the friction inherent between all governors and governed will be minimised.

It may here perhaps be stressed that a policy of devolution does not entail the conversion of sheikhs and local potentates into bureaucrats. Such would entail their incurring all the odium attaching to an alien bureaucracy and losing the sanction of their indigenous position. The very qualities which make a sheikh a leader and wise counsellor of his people are often those which render him

Devolutionary Principles in Native Administration

an inefficient official, and any tendency to throw too much of the administrative machinery on to these leaders would end in ruining them as sheikhs and decreasing the efficiency of government in its essentials.

A danger which has to be guarded against is the tendency of the keen but inexperienced official to conceive his own idea of what the natives' methods of local administration ought to be and be over-zealous in the introducing of "improvements." By doing so he may undermine the whole tribal basis.

The amalgamation of small tribes with larger ones, the forming of large tribes into confederations, the regularisation of customs by legal sanction all appeal to the tidy-minded administrator but native life is not framed on logical lines only, and by excessive formalisation the spirit of local custom may be sacrificed to the letter of administrative tidiness and the checks and balances of native life destroyed.

Premature attempts to compel tribes or sub-tribes into certain preconceived moulds by force will be a failure, and it is important to allow full scope to the value of the time factor where any question of coalition is in issue. Tribes, and Arab tribes in particular, have been amalgamating, splitting up and regrouping for centuries. The present administration in the Sudan has not yet completed four decades. There should therefore be no hurry to force any particular grouping on an area—it will come naturally in time if it is in fact a natural and healthy development, and no artificial barriers are placed in its way.

The importance of this factor—"the inevitability of gradualness"—also requires to be borne in mind when considering the matter of judicial devolution. The popularity of a court depends less upon the sanction of govern-

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ment and the particular tribes included by the local administrator in its warrant, than upon the reputation for justice it acquires in practice. A good court will gradually attract its own clientele and it is better to await the movement of smaller units towards a successful court than to try at the outset to force them together. It is impossible to force people to utilise a court they do not trust. It is the reputation of the court which attracts the people.

A further consideration is also relevant: Nearly every native has a grievance and the time in which to nourish it. The statement, argument and adjudication of these numberless grievances may afford some psychological outlet for repressions resulting from an efficient administration, and provided the courts are allowed to function on their own lines with the maximum of tribal sanction and minimum of government regularisation they fulfil in addition to their judicial function the part which newspapers, cinemas and football matches play in other lands.

Doughty in his *Arabia Deserta* describes the Arab's justice in the following terms:

"The Meglis is the council of the elders and the public tribunal, hither the tribesmen bring their causes at all times, and it is pleaded by the maintainers of both sides with busy clamour, and every one must say his word that will; The sheikh meanwhile takes council with the sheyukh, elder men and more considerable persons and judgment is given commonly without partiality and without bribes.

Their justice is such, that in the opinion of the next governed countries, the Arabs of the wilderness are the justest of mortals. Seldom the judge and elders err, in these small societies of kindred, where the life of every tribesman lies open from his infancy and his state is to all men well known. Even their suits are expedite, as all the other works of the Arabs. Seldom is a matter not heard and resolved in one sitting. Where the accusation is grave and some are found absent that should be witnesses, their cause is held over to another hearing. The nomad justice is mild where the Hebrew, in this, smelling of the settled countries, is crude."

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To the experienced eye it is easy to judge whether a court is fulfilling its functions satisfactorily. If the building is thronged with eager crowds, if the work proceeds with humour and obviously keen interest to the people, it is a fair inference that justice according to their standards is being administered. Some form of registration of cases and book audit is, of course, necessary for purpose of record, but the real test is the spirit and spontaneity of its proceedings.

In all matters pertaining to the administration of justice the system adopted, whether of codes or native customs, is only a means to an end, namely the protection of the rights of the common man, for it is on his contentment and welfare that the stability and good name of the Government rests.

To anyone who has contrasted the trials and uncertainties of direct justice administered by Europeans with the speed and sureness of touch of a good native court, there can be no doubt as to where the greater justice to the native is to be found, and it is for the District Commissioner to ensure that the standard is maintained.

In addition to clearing a large part of the judicial work through native courts the tribal organisation can play an active role in the maintenance of public security. The essence of tribalism is the collective responsibility of a tribe for the acts of its individuals. By strengthening the tribal structure and utilising this responsibility for the production of criminals and for compensation for damage done, a considerable part of the policing of the country can be accomplished without the use of Government forces. It is important therefore to guard against any measures likely to undermine this collective responsibility, and one of the most insidious of these is the excessive provision of armed native retainers for the chiefs

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of tribes. A few are, no doubt, necessary for purposes of prestige, for escorting prisoners and similar duties. But unless these men are kept under most careful control they may tend to abuse their authority for their own ends and so undermine the basis of tribal responsibility.

It is also wise to prevent these tribal retainers from imitating Government police in matters of uniform. The adoption of partial uniform tends to confuse the ignorant tribesmen as to their proper functions and to open the way to oppression. In this connection the following extract from the enquiry on the Aba troubles in Nigeria is relevant :—

“A feature of the fixed court is the adjoining ‘barrack’ containing the lock-up, the court clerk’s house and the court messengers’ lines, which in themselves give the court an alien atmosphere. It may be found possible to modify these conditions, and if the sittings of the court were less confined to one centre, they would not be so insistent. It may be added that the opportunities for bribery and corruption are increased in proportion to the greater artificial and bureaucratic character of the court.”

So much for the active part which indigenous organisations can play in the maintenance of public order. Further steps of an educative nature can also be taken in order to train chiefs in the handling of their relations with Government on a more business-like and modern footing. One of these may take the form of the grant of a measure of financial control of tribal funds.

Now one of the great benefits that British rule ought to give to native peoples is a humane system of revenue collection and a certain knowledge of what their dues are. Moreover they should have a feeling of confidence that the sums collected from them are expended directly or indirectly for their benefit and not by the tax-gatherer for his own. Any system which introduces greater chances of speculation and unjust demands requires careful scrutiny before adoption, as we shall again be mistaking

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the means for the end if, by extending the financial powers of sheikhs in order to forward devolutionary principles, we give the people a less equitable and certain revenue system.

There is, of course, much to be said for granting some measure of financial control of a tribe's funds to its leaders and for educating them to undertake further responsibilities ; but, while in many cases it may be the wisest and simplest method to make the big chiefs responsible for the actual collection of their tribe's taxes, it must be remembered that we may by utilising a large part of their time as tax-collectors render them unpopular and undermine their influence for good.

A revenue system can best be tested by the criterion of whether it is simple, equitable, certain, and so arranged that the money passes through as few hands as possible. In some cases it will be the head of the tribe and in others the village sheikh who will be the most convenient channel, but care should be taken not to change a simple and popular system because it fails to conform to some paper scheme, and try and forward theoretic principles at the cost of oppression to the common man.

There are other directions in which devolution may be practised in the administration of the public services. The village fiki can be brought into the scheme of things and taught sufficient of modern technique to allow him to play a useful part in the educational organisation, and the development of tribal schools of at least "elementary" standard is a justifiable hope. Simple medical work can be introduced with "dressers" attached to the courts and it may be possible to post fully-trained men to the areas from which they are drawn. The same applies to veterinary work and the introduction of better agricultural technique. But in all these innovations care

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must be taken to go slowly and watch carefully how the experiment works. Forcing the pace and thereby producing early failures may prejudice the chances of successful development later.

When, however, the position of the major public services is reviewed, the limitations of devolution are seen. It is obviously impossible to devolve the Post Office, the Railways, and the advanced sides of the medical and educational departments. A failure to realise these limitations may have led some to the assumption that the gradual dissolution of the central government is only a matter of time and that all services will be eventually localised and tribalised. This is entirely unwarranted. A strong central government carrying out certain essential services and a devolutionary administrative policy are complementary and not antagonistic.

It may be thought that undue stress has been laid on the dangers of "devolution" and that possibly these outweigh its advantages. To this the reply is in the words of the prophet that "he that believeth shall not make haste," and that a good principle not rightly understood can be as harmful as a bad one. In all governments it is unwise to force the pace, and particularly is this so in the case of native races where world circumstances are already bringing about changes sufficiently rapid.

In conclusion, it may perhaps be stressed how greatly these elastic principles of administration depend for their successful application upon the personalities and professional capacity of the political staff. In a highly-bureaucratic regime the individual political officer has little scope and, provided he knows his detailed task, an administration of sorts can be kept working without much difficulty. But the elastic principles implicit in

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“devolution” require for their practice officials endowed with first-hand knowledge of the country, a “touch” which instinctively guides without undue interference, and a sympathetic understanding arising from a liking for the natives and a ready sense of perspective and humour.

We are apt perhaps to over-estimate the importance of “forms of government” and forget their end, which must be the happiness and prosperity of the individual. The responsibility for that happiness will always finally rest on the district officers and this they can only discharge by that intimate understanding of all branches of their work which comes from right instinct and practical experience.

NATIVE ADMINISTRATION IN PRACTICE :

HISTORICAL OUTLINE

By B. K. COOKE, M.C.

Sudan Political Service

IN 1921 the Milner Report stated of the Sudan that :

“The administration of its different parts should be left, as far as possible, in the hands of native authorities, wherever they exist, under British supervision. . . . Decentralisation and the employment, wherever possible, of native agencies for the simple administrative needs of the country, in its present stage of development, would make both for economy and efficiency.”

This was the first occasion on which the Sudan Government native policy had been brought under critical review ; and before later events are dealt with, a very brief summary of previous history must be given.

Before the Turco-Egyptian conquest of 1821, tribal organisation in the Sudan was highly developed and universal. Many of the tribes owed allegiance in a greater or lesser degree to the Fung Kingdom ; but the latter exercised for the most part rather a loose hegemony than any form of direct rule. Furthermore, though tribal customs were elaborate and largely stabilised, the cohesion of the elements of a tribal unit was clearly inconstant, depending on the personality of the ruler of the tribal federation, climatic conditions, or even personal friendships and enmities between individuals of its constituent sections.

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The Turks broke down the Fung rule, and extended their own over a much wider area. But they, like their predecessors, made no attempt to enforce direct rule beyond occasional punitive expeditions sent to deal with a chief who was recalcitrant or failed to pay his taxes.

Of the "Mahdia," which overthrew the Turks, and dominated the country till 1898, Sir Harold MacMichael writes :—

"The period which followed was one of autocratic despotism, terrorism and internecine conflict. The tribes disintegrated between 1882 and 1898. Some sections joined the Dervishes, others resisted them, all alike were decimated by continuous punitive expeditions, savage quarrels, famine and disease. As a natural consequence, the traditional authority of the sheikhs and chiefs diminished to vanishing point and the patriarchal conception of administration was replaced, in all but a few remote districts, by militarism in its worst form. The tribal sheikh, as such, gave way to, or himself became, the leader of a contingent of freebooters instead of being the leader and arbiter of a peaceful community."

The situation that faced the Government after the reconquest was a complicated one. The large tribal federations were in a poor way ; but a few, such as the Kababish and Shukria, began rapidly to collect and re-establish themselves under their hereditary tribal leaders. The remainder seemed irrevocably broken up and scattered ; and of their various sections some returned to their ancestral lands, while others settled down in new territories to which they had fled from the Dervishes, or were now flying from the new invasion. Lastly, the relics of the Dervish armies, largely drawn from Darfur, and even further west, provided a new group of settlers, mostly in those areas where they eventually capitulated.

As was to be expected, a number of leaders of small local groups sprang up. The Government accepted these, but tended to reject larger fusions. The reasons are obvious. The military outlook dominated the situation,

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and in a country still considered potentially hostile, the absence of large federations decreased the danger of rebellion. The problem of administering innumerable small units was met by the establishment of a British and Egyptian bureaucracy, supplemented, as they became available, by carefully-selected Sudanese. Minor duties and the collection of taxes were largely left to the Sheikhs, but remuneration by a low percentage on dues paid in, instead of the payment of an adequate salary, prevented the local leaders from establishing anything approaching the position such men had held of old, and rendered the sheikhship, especially of villages, unpopular and ineffective.

The enormous decrease of population under "Mahdia" conditions made such a form of Government possible for the first few years after the re-occupation without any serious risk of breakdown. But before the issue of the Milner report it had begun to be realised that some change was essential, as an alternative to an indefinite expansion of bureaucracy, to meet the needs of a population now once more increasing under settled conditions. In certain provinces, notably in Kordofan and in Darfur after its conquest in 1916, certain sheikhs exercised powers of fine against their subjects, and the Government made no attempt to suppress the practice, although it was theoretically illegal ; but no definite steps were immediately taken to legalise or extend it.

The first Government pronouncement on administration followed the Milner Report by about a year. This Memorandum of 1922 accepted the dictum of the Report, and proceeded to consider what Native Authorities and Agencies existed, and how they had been, and might be, used. It divided them into two categories : tribal chiefs and native officials in Government service. In this year

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also, the Annual Report for 1921 stated that tentative steps had been taken to regularise the powers of the former category, and to give the latter some direct administrative duties ; and " The powers of Nomad Sheikhs Ordinance " was passed. The Ordinance was merely intended as a means of legalising judicial powers of fine already exercised ; but by including only *nomad* Sheikhs in its title, it failed in fact even to cover all of these except by an interpretation of the term wider than it could really bear.

In the years that immediately followed, the embryo devolution contained in the Ordinance provided no check over most of the country to the general tendency of increasing bureaucracy which preceded it. The incorporation into the Province of Darfur by the Anglo-French Convention of 1919 of the semi-independent state of Dar Masalit, with its Sultan still in office and its customs unimpaired, provided the opportunity of allowing a native administration to run its own affairs under the general guidance of a British Resident. But even here the spirit of bureaucracy showed signs of deflecting the development of native institutions towards its own model.

In the meantime, Chiefs' Courts were established among the Shilluk, and elsewhere in the Southern Provinces, and in 1925 the Village Courts Ordinance was passed. This Ordinance legalised the customary proceedings of village sheikhs and elders, mainly in the northern riverain provinces, setting a limit of L.E.2 to their powers of fine.

By the end of 1926 the position of administration in general may be roughly tabulated as follows :—

First, the pronouncements and enactments described above had been strained beyond what was legally permissible to give powers to tribal chiefs who either were not nomads at all or, although of equal status with those covered by the Ordinance, had never in fact exercised

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traditional powers of their own.

Secondly, the growth of the bureaucracy had been checked both by its increasing cost and also by the impossibility of immediately replacing the large number of Egyptian executive officials who had returned to Egypt in 1924-25.

Thirdly, experience of the working of the limited native machinery permitted by the Ordinance had engendered a widespread conviction that its scope should be greatly extended.

Fourthly, such extension was gravely hampered by the inadmissibility under existing legislation of the indigenous tendency to federation.

On 1st January, 1927, the Governor-General (Sir John Maffey) issued a minute in which he pointed out the divergence of the two aims set forth in the Memorandum of 1922 :—

“The appointment of natives to the public service is merely a convenience to the alien bureaucracy of which it is a part. The grant of powers to native magistrates and sheikhs is more in keeping with the prime principle, but here again unless such machinery stands on a true native and traditional basis it is off the main drive. . . . If the encouragement of native authority in the true sense of the Milner formula is our accepted policy, before old traditions die we ought to get on with extension and expansion in every direction. . . . ”

Sir John ended his note with the following two maxims :

- “(a) Experiment boldly with schemes of transferred administrative control, making no fetish of efficiency, remembering that in the long run the temper of his own people will do more to keep a native ruler straight than alien interference, and not forgetting that our efficiency is often more apparent than real and lacks those picturesque and “*amour propre*” qualities of native rule which compensate for its apparent crudities ;
- (b) Be prepared to grant a worthy scale of remuneration to the Chiefships we foster, great and small, in order to give them dignity and status, in the confident hope that we shall thereby be saved in the long run from costly elaborations of our own administrative machinery.”

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In a further minute, Sir John expanded this policy, pointing out the importance of the time factor in establishing native administration on the right lines, and the prohibitive expense of the alternative system of development on bureaucratic lines. He added :—

“ By the judicious and progressive application of devolutionary measures in districts where conditions are suitable, and by ensuring that the native agencies which are to be responsible for administering these measures are remunerated on a scale sufficient to give them their requisite measure of status and dignity, it should be possible not only to strengthen the fabric of the native organisation, but, while maintaining our supervisory staff at proper strength, gradually to reduce the number of sub-mamurs, clerks, accountants and similar bureaucratic adjuncts in the out-districts.

The obvious line of advance towards the realisation of the object in view has been generally agreed to be that of strengthening the authority wielded by the native chiefs over their people as judges in criminal and civil cases, for the power and status required by the chief as a judge, whether sitting alone or as president of a tribunal of elders, must naturally tend to enhance his authority as administrative and executive head of his tribe and district. . . .”

The immediate outcome of these notes was the enactment of the “ Powers of Sheikhs Ordinance ” in 1927. This omitted the word “ nomad,” and for the first time authorised the Sheikhs’ (major) Courts to inflict imprisonment. It furthermore increased their powers of fine. The limit set to the powers of major courts was two years’ imprisonment and a fine of £E.100 ; to those of the minor courts, fine only, not exceeding £E.20. Many of the Courts set up under the Ordinance were not, of course, given powers to the full extent allowed.

Experience soon showed that the 1927 Ordinance made insufficient allowance for the tendency of small units to coalesce, and that special budgetary provision was needed to provide the chiefs and sheikhs with adequate remuneration in keeping with their new duties. The first point was met by the enactment of the Powers of Sheikhs

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Ordinance, 1928, which allowed for a court “presided over by a Sheikh (of a tribe or district) and composed of other sheikhs and his or their tribal or district elders” : the second, by setting aside a sum of £E.15,000 in the budget to provide the salaries required. At the same time an amendment was made to the Code of Criminal Procedure to legalise the formation of benches of native magistrates in towns for the purpose of dealing with petty crime under the code. Their powers were at first limited to imprisonment for one month and a fine of £E.5, but were later considerably extended.

The advance made is well illustrated by the preambles to the three Ordinances.

1922 reads :—“Whereas it has from time immemorial been customary for *Sheikhs of nomad tribes* to exercise powers of punishment upon their tribesmen and of deciding disputes among them, and whereas it is expedient that the exercise of these powers should be *regularised*. . . .”

1927 :—“Whereas it has from time immemorial been customary for *native sheikhs* sitting alone or assisted by their tribal or district elders to exercise powers of punishment upon those subject to their tribal or local jurisdiction and of deciding disputes among them, and whereas it is expedient that these powers *should be extended* and their exercise regularised. . . .”

And 1928, repeating the 1927 preamble, made also the important addition :—

“and whereas it has been customary to use inter-tribal or interregional councils for the settlement of inter-tribal or inter-regional disputes”

The position reached after the passing of 1928 Ordinance may be summarised thus : The Ordinances dealt with the judicial side only ; but their increasing elasticity and the augmented powers of punishment granted thereunder were expressly designed to rebuild and strengthen the whole structure of native administration. For example, where small units joined together to form a court, they tended *pari passu* to coalesce also for other purposes.

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The Courts themselves differed widely, according to their own capacity and local needs, both in powers and procedure. In criminal matters there were excluded from the cognizance of *all* courts offences connected with homicide, sedition, slavery, and brigandage, and offences in which Government servants or foreigners were involved. They were empowered to settle civil suits except those connected with registered land. But in regard to matters of Mohammedan Law (marriage, divorce, inheritance) a native court could only take cognizance of cases wherein *both* parties to a suit agreed that the matter between them should be settled by that court ; failing such agreement, the case must be transferred to the Government Qadi. Moreover, where a native court and a Mohammedan Law Court had their headquarters in the same town, the former was debarred from hearing this class of case altogether.

A word must be said of the results attained by full use of the possibilities of federation provided by the 1928 Ordinance. Disintegrated fragments of tribes, too small and insignificant to make much progress even when given their own small courts, by amalgamation achieved prestige among their neighbours and developed internally a strong civic sense. New life was infused into institutions whose long dormancy had led to decay. The Hamar tribe of Kordofan, for example, had been a byword for the feebleness of their section chiefs and the inertia of the tribesmen in general. Its federation under a Nazir from the hereditary ruling house produced an almost instantaneous effect. The tribe as a whole began to lift up its head among its neighbours, and a new spirit of self-respect, energy, and interest in life and in the tribal welfare permeated its individual members. Nor was this by any means an isolated case. The Gima'a and Hassania con-

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federations of the White Nile Province, to mention no others, prove conclusively that a sound indigenous instinct, when sympathetically fostered instead of being ignored or suppressed, can solve many of the country's administrative problems.

Executive devolution was not expressly authorised by any enactments : but progress on the judicial side tended to bring an extension of native executive authority with it. As was said above, in some parts of the country sheikhs had early been made responsible in various degrees for assessment and collection of taxes, and to a limited extent for the maintenance of public order. With the establishment of Courts came the necessity for subordinate staff to assist the President ; Vice-Presidents who could preside in his absence over judicial proceedings, scribes to keep the Court records, retainers to maintain order and bring in witnesses. Especially in the west, the results were rapid and far-reaching. Control of markets, of various departmental activities (agricultural, veterinary, etc.), and of many of the duties hitherto performed by Government accountants and police, were taken over by the Native authorities. Considerable economies of Government staff resulted without loss of efficiency. In Western Kordofan it has been possible to dispense completely with three sub-district headquarters and their whole classified staff ; and similar reductions with equally successful results in other parts of the country continue to show the vitality and capacity of native administration on its executive side.

On the financial side, devolution was considerably more circumscribed. Native budgets were inaugurated in Dar Masalit in the west, and Dar Shukria in Kassala Province. These budgets, though a considerable revolutionary advance on anything that had gone before,

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were not budgets in the sense that the native authority had any great measure of financial control. What they really amounted to was the receipt and expenditure by the native authority of sums of money predetermined by the Government, and the accountancy thereof. The economic crisis in 1931 further spoilt the façade of the Shukria budget, since the Government was forced to appropriate the budget surplus in addition to the fixed contribution to central funds.

Apart from the "budgets," other native authorities were given additional financial responsibilities. In some cases the big taxes such as ushur and herd tax were assessed, collected, and accounted for in detail by the native authority, the Government merely concerning itself with some supervision of the assessment and the receipt of the lump sum total of the tax. It also became common to pay over monthly to the native authority the total sum due in remuneration and salaries, leaving to it the duties of making, and accounting for, the payments to individual members of its staff.

Rapid expansion along the lines indicated necessitated a further extension of the legislation governing native courts. In 1931 a new "Chiefs' Courts Ordinance" was passed to meet the needs of the pagan tribes in the South, and in the North a widely permissive "Native Courts Ordinance" replaced the various enactments previously made. This latter Ordinance removed any limit to the amounts of fine and imprisonment which the Major Courts established under it might be allowed to inflict, and narrowed down both the offences excluded from its cognizance and also the classes of persons whom it was forbidden to try. Only homicide, sedition, and slavery are compulsorily excluded by the Ordinance, but each Court has varying additional restrictions imposed in its own

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warrant and rules. Some modification of the rules *vis-a-vis* Mohammedan Law Courts has also taken place. Some of the latter have been closed in places where the success and prestige of the native court had rendered them unnecessary. In other places the Mohammedan Law Court and the Native Court hear similar cases in the same towns, the Native Court confining itself to persons directly under its own jurisdiction. The sympathetic attitude of many of the Government Qadis has been noteworthy both in meeting the difficulties normally attendant on a divided jurisdiction, and by encouragement and advice in raising the standard of the religious jurisdiction of the Native Courts.

To round off the picture of native administration in practice as it at present appears, mention must be made of one or two partly extraneous matters. The economic crisis of 1931 and onwards produced a serious check in two directions. First, an expanding native administration involves increased expenditure ; and, though such expenditure is almost invariably off-set eventually by economies elsewhere, these are often impossible to secure immediately. Expansion was therefore limited to bare necessities, and a general slowing up took place. Secondly, the supervisory staff was reduced to the minimum consonant with safety, and even below that ; and the multiplicity of other duties which this attenuated staff was still called upon to perform led to an inevitable reduction of supervision just at the time when it was the more essential owing to the assumption by the native authorities of increased responsibilities.

When in 1927 the big advance in native administration began, it was obvious that a certain amount of apprehension, if not definite opposition, might be expected from those classes who had received such higher education as

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the Sudan has to offer. For many years they had grown accustomed to expect that the bourne of their schooling was a post in the Government bureaucracy, and they could hardly view without apprehension a trend of policy which was likely to diminish the number of such posts. The rural bias now being given to the Government's educational policy, and the creation of more responsible positions in the bureaucracy itself will doubtless reduce considerably the risk of an unemployed and discontented "intelligentsia." These matters are outside the scope of this article. But a point of paramount importance is that the success of the policy of devolution and the growing prestige of the native authorities have begun to attract educated Sudanese to take service with them. The advantages of this tendency are twofold and complementary. The infusion of a higher educational standard into a local or tribal authority enables the latter to progress more rapidly, and to deal with matters which would otherwise be beyond its capacity; while at the same time the process of expansion so aided offers increasing opportunities of employment to the products of higher education.

Lastly, the expansion of native authorities brings them into contact with the commercial development of the country. The original theory that native administration was only suitable to backward tribal areas incapable of development has been outgrown. In fact, the contact of native authorities with commercial interests proves in most cases to be of advantage to both. An example or two will illustrate this. The important cotton-growing area of the Gash lies largely within the territories of the Nazir of the Hadendoa. It has attracted in various capacities a number of non-Hadendoa elements; and local panels of the Hadendoa Court have been created to deal

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with their judicial concerns. The result of this interaction has been that the chief stimulus to agricultural production has been given by and through the Nazir, that the functions and powers of the courts have been steadily extended with corresponding increase of their prestige, and that the non-Hadendoa elements are endeavouring to enter the Hadendoa administration to an ever greater degree. A second example from another part of the country is provided by the establishment of a British mining concession in a place which happened to be the headquarters of a not very advanced native administration. The position was carefully explained to the British manager and the Nazir, and the former agreed to deal with the latter in all matters that could be settled locally. The District Commissioner was, of course, available in case of any breakdown ; but so well did the arrangement work that he was never in fact called in. Among other things, the Nazir settled a strike of the mine's employees with complete satisfaction to both parties, and with equal success composed differences between servants and their British employers.

To sum up, it is beyond question that native administration has fully justified itself in practice on lines far other than those originally contemplated in some quarters. It has proved itself infinitely adaptable to modern conditions and not merely an interesting survival convenient for dealing with backward areas. In fact, the most successful native authorities are frequently those most in contact with modern ideas and development. They are also capable of absorbing to an ever-increasing extent the educated classes to the mutual benefit of both. Given sympathetic guidance behind the scenes by British officials who are careful to refrain from unnecessarily imposing on them exotic ideas, they will make their own rate of

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progress and evolve their own entirely satisfactory ways of dealing with new problems as they arise.

Some books relevant to the subjects dealt with in
Part II :—

| | | | |
|----------------------|-----|-----|---|
| Sir H. A. MacMichael | ... | ... | <i>History of the Arabs in the Sudan.</i> |
| Lord Lugard | ... | ... | <i>The Dual Mandate.</i> |
| Julian Huxley | ... | ... | <i>Africa View.</i> |
| Austin Kennett | ... | ... | <i>Beduin Justice.</i> |
| C. G. Seligman | ... | ... | <i>Pagan Tribes of the Nilotic Sudan.</i> |
| C. G. Seligman | ... | ... | <i>The Races of Africa.</i> |
| Edwin Smith | ... | ... | <i>The Golden Stool.</i> |
| R. R. Marrett | ... | ... | <i>Anthropology.</i> |
| H. Oldham and Gibson | ... | ... | <i>The Remaking of Man in Africa.</i> |
| C. L. Temple | ... | ... | <i>Native Races and their Rulers.</i> |
| C. M. Doughty | ... | ... | <i>Arabia Deserta.</i> |
| F. Weyland | ... | ... | <i>The Language Families of Africa.</i> |

“ Say, Verily, if men and genii were purposely assembled that they might produce a book like the Koran they could not produce one like unto it.”

THE KORAN.

*“ My brother bows, so saith Kabir,
To wood and stone in heathenwise,
Yet in my brother's voice I hear
Mine own unanswered agonies.
His God is as his fates assign,
His prayer is all the world's—and mine.”*

KIPLING.

PART III

RELIGION IN THE SUDAN

By S. HILLELSON

Late Sudan Civil Service

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CORRESPONDING to the division of the Sudan into Can Arab and a negroid area, there is a religious division into the territory of Islam and that of paganism. The overflow of Mohammedanism into the pagan area has been inconsiderable, and though many detribalized individuals of negroid origin profess Islam, paganism has not been seriously attacked in its own country. Even on the fringes of the two areas, where both systems live side by side, there has been little inter-penetration. Thus in the Nuba Mountains, the Arab tribesmen who pasture their cattle in the plains profess Islam, while most of the negroid hill people preserve their primitive beliefs, and show little sign of abandoning them. Indeed, the Moslem communities, consisting of Government employees, merchants, ex-soldiers, etc., which are found in the larger stations of the southern provinces, do not appear to exert any considerable propagandist influence on the pagan tribes.

MOHAMMEDANISM

This is not the place for a general exposition of the tenets of Islam. The subject will, therefore, be examined on those aspects which are of particular importance in the administration and politics of the Sudan.

Religion in the Sudan

1. *The Official Religious Institutions.*—These are represented by the courts administering the religious law and by the public mosques and their staff. The organization of these institutions is not indigenous to the country, but was introduced by the old Egyptian Government and, after being in abeyance during the rule of the Mahdi and the Khalifa, was re-established by the present administration. Religious courts (*mahkama shar'ia*) which exist in province and district headquarters administer the Mohammedan law on such matters as inheritance, gifts, charitable endowments, marriage and divorce, and their judgments are executed by the administrative authorities. The code administered is that of Abu Hanifa, which is that officially established in Turkey and its dependencies, but the vast majority of natives of the Sudan adhere to the Maliki rite. The judges (*kadis*) of the courts are officials of the Legal Department, the highest functionaries being the Grand *Kadi* and the *Mufti*. Attached to the Gordon College, Khartoum, there is a section in which young natives of the Sudan are trained for the profession of *Kadi*, the chief subjects of instruction being Arabic language and literature, the Koran and its interpretation, and Mohammedan law. The *kadis* in addition to their judicial functions are responsible for the administration of the mosques which are maintained by public funds. The minor staff of these mosques (preachers and *mu'addins*) are to a great extent recruited from an institution for the study of Moslem learning (*el ma'had el 'ilmi*) at Omdurman, which is administered by the Board of Ulama, a body acting under the authority of the Legal Department.

The influence and importance of the official institutions are considerably greater in the towns, and among the section of the population which has been affected by education of a modern type, than it is amongst the rural

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and pastoral people who form the vast majority of the inhabitants. Amongst the latter, matters of inheritance, marriage, etc., may be settled by tribal custom in preference to the rule of the *shari'a*, while the organisation of worship and the religious life in general centres round the *tarikas* or fraternities rather than the official mosques and the *kadi's* court. Nearly every Moslem native of the Sudan belongs to one or other of these societies, and looks to the head of his *tarika* for guidance in matters spiritual and temporal. Their influence is accordingly very great.

2. *The Tarikas*.—The word *tarika* literally means "path" and is applied to certain organisations of religiously minded people united by a common faith in the virtue of some particular teacher, and practising a common ritual of prayer and devotion. It is erroneous to describe them as sects, since the differences between them are not matters of faith and doctrine, but of organisation and ritual. The basic idea underlying their existence is the belief that common man, in order to attain salvation, needs the guidance of some person endowed with peculiar spiritual virtue (*baraka*) who acts as intermediary between him and the Deity.

Such spiritual guides were the saints who founded the *tarikas* in the past, and their virtue is believed to be inherent in their descendants who are at their head at the present day.

The *tarikas* of Islam are of considerable antiquity, and they arose around certain famous saints, whose influence may be compared to that of St. Francis and St. Dominic in Christendom. These men practised a form of mystical doctrine called *sufism*, and acquired fame for their ascetic virtues and their miracles concerning which the most extravagant stories are told. Perhaps the most famous of these guides were Abd el Kadir el Gilani (1079–1186) and Abul Hasan el Shadhili (1196–1258) whose names still survive in the *tarikas* founded by them.

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In the course of time prominent religious men of the later ages formed new *tarikas* which are regarded as branches or offshoots of the earlier communities and this process of forming new branches has continued until quite recent times. These new societies remain in spiritual communion with the parent community, but are distinguished by a separate organization and often by the adoption of changes in the ritual.

The characteristic ritual of the *tarikas* is the performance of the *zikr* (lit. remembrance), a devotional exercise based on the Koranic injunction to "remember God with much remembering." The essence of the *zikr* is the repetition many times of such phrases as "God is great," "Praise to God," "There is no God but God," "Peace and blessings upon the Prophet," and the different names of God. Spiritual songs or hymns may be introduced, as also rhythmical movements of the body resembling dancing. The actual details of the ritual vary in the different communities. *Zikrs* are held at regular weekly services, but may also be organized for special occasions such as public or private feasts. Another part of the ritual of the *tarikas* is contained in certain prayers and selections from the Koran, which are used both for public and private devotion, and which are designated as *hizb* or *wird* or *ratib*. A well-known example of such a document is the *ratib* or prayer-book of the Mahdists.

The *tarikas* were introduced into the Sudan in the 11th century when the foundation of the Fung Kingdom led to great missionary activity in those parts of the country which were still unconverted to Islam. In this earlier period they possessed no central organization, and the "path" was taught independently by a large number of holy men, united by spiritual communion, but not

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bound together into a single society. In later times, and especially since the Egyptian conquest, the greater *tarikas* developed a definite organization centralized in the Great Sheikh of the Path, usually a lineal descendant of the founder, whose authority is delegated to a number of khalifas or local representatives. Membership of a *tarika* involves spiritual obedience to the head and his khalifas, and such obedience is easily extended to mundane affairs. It is also the custom of many to offer to the head of their *tarika* certain pious offerings known as *zeka*, i.e., gifts ordained by Moslem law to be set aside for religious purposes, for the receiving of which tribal and religious leaders compete. The collection of *zeka*, often from unwilling givers, has, in the past, given rise to jealousies between chiefs of tribes and the *tarikas* as well as hardships to the victims of these exactions. The attitude of the Government is that, whereas the voluntary payment of *zeka*, being a matter of private conscience, can be left to the individual, the collection of *zeka* either by tribal or religious leaders is not to be countenanced.

The following is a brief account of the *tarikas* existing in the Sudan at the present day. It will be seen that all of them are of comparatively recent creation, though they claim to continue the tradition of the earlier orders, founded in the 12th and 13th centuries :—

(1) The Mirghania or Khatmia, founded by Saiyid Mohammed Osman el Kabir who was born in the Hedjaz in 1787, and deriving its name from Saiyid Ali Mirghani, an ancestor of the founder. Saiyid Mohammed Osman based his new *tarika* on a combination of the principles of four earlier confraternities. He travelled all over the Sudan and finally founded the village of El Khatmia at Kassala, which became the headquarters of his family. He died at Mecca in 1851.

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The Mirghania is, perhaps, the best-known and most widely distributed *tarika* in the Sudan at the present day. Its leaders are Saiyid Ali and Saiyid Mohammed Osman, the first of whom has the greater prestige. Saiyid Ali, who was honoured with the K.C.M.G. in 1916, and was the head of the Sudan delegation to England in 1919, lives chiefly in Khartoum and Omdurman, while Saiyid Mohammed Osman lives at Kassala. It is widely spread throughout the eastern and northern Sudan and holds almost undisputed sway in the provinces of Dongola and Halfa.

(2) The Ismailia, a recent offshoot of the Mirghania, founded by Saiyid El Mekki, a religious leader who played a considerable part during Mahdism and was greatly trusted by the Khalifa Abdullahi. Saiyid El Mekki died in 1906 leaving a number of sons, and a grandson, Saiyid Mirghani, who is the head of the family by seniority of descent. The headquarters of the Ismailia *tarika* is at El Obeid, and its followers are mainly found in the western Sudan.

(3) The Sammania, historically connected with the Khalwatia *tarika* of the 14th century, but itself of much more recent creation. It was introduced into the Sudan by Saiyid Ahmed el Taiyib Ibn El Beshir who died in 1823, and still has a great following. Mohammed Sherif Nur El Daim, the teacher of the Mahdi, was the head of the *tarika* under Turkish rule, and the Mahdi was a zealous disciple until he broke away and set out on a path of his own. Sherif Yusif el Hindi, one of the three most prominent religious notables of the Sudan was originally a follower of the Sammania, but has founded a *tarika* of his own which is beginning to be known as the Hindia.

(4) The Tijania, like the last-mentioned *tarika* an off-

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shoot of the Khalwatia, was founded at Fez in the 18th century, and is perhaps the most important order in West Africa. Its adherents in the Sudan are chiefly found amongst the Hausa and Fellata immigrants, and in certain parts of Darfur.

A leading personality is Fiki Dardiri who resides at Bara in Kordofan.

(5) The Majzubia, a *tarika* which at one time had a great following in the Sudan, but is of importance chiefly on account of the prestige of the leading personalities. It was founded in the early 18th century by Mohammed el Majzub of the *Ja'liyin* tribe, and derives its tradition from the *tarika* of Abul Hasan el Shadhili. The headquarters of the Majzubia are at Damer in Berber province, and during the 18th century this town formed a small theocratic state under the rule of the Majazib sheikhs. During this period Damer enjoyed great prestige as the centre of theological learning in the Sudan. At the present day followers of the Majzubia are found among the Ja'liyin, the Hadendoa, and some of the Bishariyin, and the *tarika* has some influence at Suakin.

(6) The Ahmedia or Idrisia, founded in the 18th century by Ahmed Ibn Idris of Fez in Morocco, who was originally a follower of the Shadhiliya order. The present head of this *tarika*, Sherif Mohammed Abu el Muta'al lives at Cairo and Daraw in Upper Egypt, but another branch of the family is settled at Argo in Dongola province. The tomb of Sayid el Muta'al, the father of Sherif Mohammed, is at Dongola, and the anniversary of his death is celebrated annually there and at Omdurman. This celebration is known as a Holia.

Another branch of the family is represented in 'Asir in Arabia, where an Idrisi theocratic state existed until its recent absorption by the Wahabi power.

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This Ahmedia must be distinguished from another order bearing the same name, which was established by Sheikh Ahmed el Bedawi, a popular Egyptian saint, whose tomb at Tanta attracts many pilgrims. The order of Ahmed el Bedawi has a large following in Egypt, but is not prominently represented in the Sudan.

(7) The Rashidia, founded by Ibrahim el Rashid, a disciple of the Ahmed Ibn Idris mentioned in the preceding paragraph, and regarded as an offshoot of the Ahmedia. It has a number of followers in Dongola, Omdurman, and on the White Nile, especially at Kawa.

This list is not exhaustive, and it should be mentioned that, in addition to the *tarikas* possessing a widespread organization in different parts of the Sudan, there are numerous smaller communities centred round the tomb of some holy man of the past, whose memory and religious teaching are kept alive by his descendants. Examples of such religious families, who often are of considerable local importance, are the Khojalab near Khartoum North, the descendants of Idris Ibn el Arbab at Eilafun near Khartoum, the 'Arakiyin at Abu Haraz on the Blue Nile, and the Medaniyin, whose ancestor was the founder of Wad Medani.

MAHDISM

Mahdism, in general, is a Messianic belief held by orthodox Sunni Islam, that God will send the Rightly Guided One (el Mahdi) who is the precursor of the second coming of Christ and of the millennium, and will deliver the world from evil, instituting a reign of perfect justice.

In orthodox belief, the Mahdi is still to come, but the history of Islam records the rise of many false Mahdist movements, a characteristic of all being that they are militant, directed against abuses and heresies and, in accordance with the Mahdi's claim to supreme spiritual

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and temporal authority, hostile to established institutions, civil and religious. The Mahdists of the Sudan are those who believe that the true Mahdi appeared in the person of a Dongolawi religious sheikh called Mohammed Ahmed, who proclaimed himself in that character in 1881, and called upon his countrymen in the name of true religion to rise against a worldly and heretical Government. Starting from insignificant beginnings, but favoured by general discontent, this movement met with a series of astonishing successes, and the Mahdi was soon master of the Sudan. The Mahdist state was designed as a theocratic Government inspired by the aim to restore Islam to the condition in which it had been at the time of the Prophet and basing its authority on the divine mission of the founder. The Mahdi died in 1885, and was succeeded by the Khalifa Abdullahi, who, though swayed by worldly motives, never lost sight of the theocratic character of his rule and never ceased to profess his veneration for the Mahdi. In 1898, however, the reconquest of the Sudan broke Mahdism as a political power.

Present-day Mahdism centres round the person of Sir Sayid Abd el Rahman, a posthumous son of the Mahdi, and counts many adherents amongst the Baggara tribes of Kordofan and Darfur.

MOVEMENTS OUTSIDE THE SUDAN

Under this heading it is desirable to mention two movements, partly religious, partly political, which are of considerable importance in countries bordering on the Sudan, though they are not at present prominently represented within the country itself.

(a) *The Senusi Order*.—Mohammed ibn Ali El Senusi, a native of Algeria, became prominent as a religious teacher in the first half of the 19th century and, after

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travelling in Egypt and the Hedjaz, settled in the Libyan desert where he died in 1859. By that time his influence had become predominant amongst the sparse population on the Libyan desert and in parts of the Sahara, and Senusi settlements (*zawiya*) sprang up in many of the oases where the teaching of the order was propagated. The keynote of Senusism was opposition to the innovations introduced into the life and manners of Moslem countries by the ever-increasing contact with western civilization, an opposition which took the form, less of active hostility than of passive resistance and retirement to inaccessible places where such contact could be avoided. As in many other reforming movements in Islam, the attempt was made to base life exclusively on the Koran and the Sunna of the Prophet, and to eliminate all accretions not expressly sanctioned by these two sources of authority.

The great man of Senusism was Mohammed el Mahdi, the eldest son of the founder, who continued his father's policy and, in his anxiety to remove himself from outside influences, left Jaghbub and retired to Kufra and then to Geru. There, however, he found himself confronted by the expansion of French colonization and his followers fought to their disadvantage several battles against the French in 1901 and 1902. After Mohammed el Mahdi's death in 1902 the policy of the order has been less consistent and less united, and the several members of the leading family have at times pursued different aims. The leadership of the community devolved on Saiyid Ahmed el Sherif, nephew of the founder, who established himself in Kufra in 1903, and accepted overtures of Turkish friendship, as a result of which he took part in the Italo-Turkish war of 1912 and continued hostilities against Italy after the conclusion of peace. In the Great War, Saiyid

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Ahmed allied himself with Turkey and prepared to fight the Italians and to attack the British in Egypt. In this policy he was opposed by Saiyid Mohammed Idris, a son of Mohammed el Mahdi, who himself aspired to the leadership of the order.

Saiyid Ahmed's expedition against Egypt in 1916 ended in his complete discomfiture, and enabled Mohammed Idris to assume the leadership and to enter into agreements with the Italian and British Governments. Saiyid Ahmed left Libya and, after living in Turkey under the protection of Mustafa Kemal, retired to Arabia. Jaghbub, the cradle of the order in Libya, was occupied by Italian troops in March, 1926.

The connection between the Senusi order and the Sudan is but slight. The Mahdi of the Sudan was sufficiently impressed by the prestige of Mohammed el Mahdi el Senusi to offer him one of the four Khalifa-ships in his own sect, but this offer was rejected. Sultan Ali Dinar of Darfur maintained relations with the order and it was through Kufra that he corresponded with the Turks, when he decided to throw in his lot with the enemies of Britain in the Great War. At present, except for a few immigrants from Wadai and the western desert, there are no followers of the Senusi in the Sudan.

(b) *Wahhabism*.—The Wahhabi doctrine resembles the Senusi movement in so far as it represents another instance of that "return to the Koran and the Sunna," which has been the ideal of so many Moslem zealots. Unlike Senusism, however, Wahhabism is not organised as an order, but has formed itself into a distinctive sect which claims exclusive possession of the true doctrine and denies the name of Moslem to everyone who disagrees with its tenets.

The founder of the movement was Mohammed Ibn Abd

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el Wahhab (died 1787), a zealous theologian of Nejd, who preached against the "innovations" which had found general acceptance amongst Mohammedans of his day, and, insisting upon a strictly literal interpretation of the Koran, denounced all beliefs and practices not expressly sanctioned by the book and by the usage of the earliest generation of believers.

The most important feature of his teaching was the categorical denial of the doctrine of a mediator between man and the Deity, and therefore irreconcilable opposition to the cult of saints and the veneration of tombs which play such a leading part in the popular religion of the masses.

The war against "innovations" was directed not only against points of doctrine and ritual, but also against the luxurious habits of life, which had been discountenanced by the Prophet. The details of daily life were regulated in a spirit of rigid puritanism. To the Wahhabi zealot, the use of tobacco, the playing of musical instruments, and the wearing of silk and jewellery are anathema, and, where Wahhabism rules, the prohibitions are strictly enforced.

The preaching of Mohammed Ibn Abd el Wahhāb made a deep impression on the tribesmen of Nejd, and became of political importance when it converted Mohammed Ibn Sa'ud, a chief of the 'Anaiza tribe at Dara'iyah. The latter married the preacher's daughter and addressed himself to the task of spreading the new doctrines and enlarging his own principality. The son of this alliance was 'Abd el 'Aziz Ibn Sa'ud, the great military champion of Wahhabism who, in his father's lifetime and after his death, led his armies to the conquest of Arabia, and captured Mecca in 1803. The work of 'Abd el 'Aziz was continued by his son and successor, Abdullah, but the

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tide of Wahhabi conquests was stemmed by Mohammed Ali, Viceroy of Egypt, who, in a series of arduous campaigns, reconquered the holy places for Turkey, and at last took Dara'iyah, which he razed to the ground.

The Wahhabi empire thus proved a short-lived dream, but the scattered survivors of the Sa'ud dynasty kept alight the flame of the Wahhabi faith, and never renounced the hope of restoring the fortunes of their house. The history of Central Arabia during the greater part of the 19th century consists of the struggle, for mastery in Nejd, between the successors of Ibn Sa'ud and the rival house of Ibn Rashid, chiefs of the Shammar tribe, a struggle which passed through a number of vicissitudes and dramatic reversals of fortune, and, in which Turkey from time to time intervened on the side of Ibn Rashid. The Wahhabi leader at the time of the outbreak of the European War was 'Abd el 'Aziz Ibn Sa'ud, and under him Wahhabism once more became a militant and conquering force, which overflowed the confines of Central Arabia. 'Abd el 'Aziz not only drove the Turks from Nejd and crushed the house of Ibn Rashid, but carried the arms of the Ikh-wan (as the Wahhabi zealots are called) against the Sherifian house of Mecca, which in the post-war settlement had acquired the kingship of the Hedjaz. Since 1925 the power of Ibn Sa'ud has been paramount in Arabia; Abd el Aziz Ibn Sa'ud bears the title of King of the Hedjaz and Nejd and its dependencies, and, except for the Zaidi Imam of the Yemen, has no rival within the peninsula.

The Wahhabi state has thus come within the orbit of international politics, since the power which holds the Hedjaz is of importance to all Moslems interested in the pilgrimage and in the holy places of their faith. The problem now before Ibn Sa'ud is how to reconcile the

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creed of an intolerant and rigid sect with the ambitions of one who aspires to a pre-eminent place amongst the rulers of Islam.

The doctrines of Wahhabism have, however, no attraction for the natives of the Sudan, for whom the cult of saints forms an important part of the religious life.

An Egyptian sheikh, Mohammed Madi Abul 'Azaim, who, previous to his return to Egypt, possessed a certain following in Khartoum and Omdurman, preached doctrines akin to Wahhabism, and has more recently professed himself a follower of the sect, but on the whole Wahhabism influence is non-existent in the Sudan.

PAGAN RELIGION

In the present review one can only refer briefly to certain leading ideas connected with the religious beliefs and rites of the pagan tribes. The details naturally vary considerably from tribe to tribe.

1. *The High God and Ancestral Spirits.*—Most Sudanese blacks have a belief in the existence of a High God, who is not thought to concern himself in the affairs of mankind, though prayers are sometimes addressed to him. Amongst the Dinka the High God is called Dengdit (Great Rain) or Nyalich, and there are shrines all over the Dinka country, at which offerings are made to him. The Shilluk term for the High God is Juok, a word which recurs in other Nilotic languages as the name of ancestral spirits, while the Lotuko Naijok is a vaguely-defined supernatural power, associated with death and disease, and generally with things of which the cause is not apparent.

As far as worship and the interests of mankind are concerned ancestral spirits play a more important part than the otiose High God. The latter is rarely approached

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direct, and it is rather the spirit of some famous ancestor, supposed to be incarnated in the Rain Maker or Spiritual Chief, to whom the worshippers address themselves in their prayers and to whom sacrifices are made. A common beginning of the prayers of certain Dinka is "*Nyalich ko kwar*," "God and our ancestors"; the Afitti Nuba of Jebel Daier and the people of Dilling never address God directly in their prayers, but go to the *Kujur*, addressing him or rather the ancestral spirit within him, as "our ancestor God." Both examples illustrate the intimate connection between the cult of the High God and that of the ancestors.

2. *Divine Kings*.—The belief that an ancestral spirit is incarnated in successive generations of his descendants appears in its most striking form in the religion of the Shilluk, which is based on the cult of Nyakang, a semi-divine hero who is reputed to be the founder of the Shilluk nation and its first king. According to Shilluk belief it is only through Nyakang that men can approach the mysterious and invisible power of Juok, and it is Nyakang to whom the sacred shrines, found in certain Shilluk villages, are dedicated. The most sacred of these shrines are at the villages of Alurwa, Fashoda, and Fanyikang, and they consist of a number of huts, within an enclosure, the roofs of which terminate in an ornament consisting in an ostrich egg from which the blade of a spear projects. In each king or *ret* of the Shilluk, Nyakang is incarnated and he therefore belongs to the category of rulers whom Sir James Frazer has called "divine kings," and of whom it is characteristic that they are ceremonially slain, when they have reached old age or otherwise have lost their vigour. This ceremonial of killing the Shilluk kings took place until quite recent times. The new king must belong to one of certain specified families descended from

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Nyakang, and it is held that, upon due election the divine spirit is transmitted to him.

3. *Kujurs and Rain-makers*.—It is only amongst the Shilluk that there exists a close religious and political organization embracing the whole tribe, but the power and influence of sectional and local rain-makers and *kujurs* amongst many other tribes (Dinka, Nuer, Nuba, and others) are based on the same idea of the incarnation of a divine ancestor. The Dilling Nuba believe that the *kujur* is the earthly embodiment of the *aro* or deified tribal ancestors, who directs the fate of his descendants and sends all blessings and calamities, and the special relation is expressed in the fact that the *kujur* is actually addressed as *aro*, and that the veneration with which the *aro* is regarded by the people is transferred to the *kujur*.

In many cases, though not always, the functions of spiritual and temporal chief are combined in the same person, and even where this is not the case, the *kujur* exercises great influence on all the affairs of his tribe. One of his most important functions is the performance of the ceremonies which ensure an adequate rainfall, and to his power to produce and withhold rain for the community much of his authority is due.

Thus the Lotuko and Acholi rain-makers also function as temporal chiefs, and, though there is no clear indication of any belief in incarnation, it is necessary that the holder of the office should be descended from rain-makers both on the father's and the mother's side. Amongst the Dinka, the term *bain* is applied both to rain-makers and to ordinary village chiefs, and the prestige and influence of the different *bain* vary enormously. Amongst the Nuba of Gulfan, the Great *Kujur*, with his several sub-

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ordinates, combines the functions of spiritual and political chief, while other Nuba have kings as well as *kujurs*. The people of Dilling are divided into two sections, one of which recognises the Great *Kujur* as sole chief, while the other has a king and a number of subordinate *kujurs*.

It is perhaps worth noting that in some cases the chief who represents a community in their dealings with the Government is not the true religious chief, recognised by the tribe, but a subordinate appointed for this duty, because special rules of sanctity prevent the real chief from dealing with the outside world.

4. *Totemism and Exogamy*.—Totemism may be defined as a belief in a special relationship between a family group or clan and certain animals or plants or other objects. Thus the people of a clan, who have the leopard for their totem, regard themselves as bound to the leopard by ties corresponding to those of human kinship, and no man ever injures his totem animal or plant. Many Dinka clans speak of the totem animal as their ancestor, and refer to it in terms identical with those used for human relatives. The totem is not always an animal or plant but may be some natural object or phenomenon, such as fire or rain, or a stone, in which case there is probably no theory of descent from the totem, but rather of some other association. The Lotuko believe that a tribesman, at his death, turns into the totem animal of his clan; thus a member of the Igago clan, which has the crocodile for its totem, transmigrate into or is reborn as a crocodile when he dies.

Wherever there is totemism there is found exogamy, viz., the prohibition of marrying within the group which shares the same totem. The members of the clan which has a common totem regard themselves as so closely related by blood, that marriage amongst them would be

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equivalent to incest and a wife must be sought in a group whose totem is different from that of the husband.

Totemism is strongly developed amongst the Dinka, and is likewise found amongst many other tribes of the Nilotic area. The Shilluk are not totemistic but there are certain indications of the existence of totemism in the past, and they avoid consanguineous marriages.

5. *Influence of Religion on Politics.*—As has been said, the religious ideals and cults of the pagans differ from tribe to tribe, and religion is regarded as a matter of tribal custom affecting only the community. It therefore offers no basis for the united action of several tribes. With the conspicuous exception of the Shilluk organization, there is generally little cohesion within the tribes themselves, and the prestige of a rain-maker or *kujur* is, as a rule, confined to his own section or his own locality, though the fame and influence of a particularly successful practitioner might spread over a wider area.

In 1921, the appearance of a pool in the country of the Iyat Agar Dinka was invested with religious significance by the people, and a feeling of vague excitement and unrest not only spread over the whole Dinka country, but seemed to affect the Mandari and Nuer as well. The situation was exploited by two ambitious Dinka chiefs and almost resulted in a serious rising against the Government. Similar incidents, comparable to the risings of *fikis* and false prophets in the Mohammedan north, occur from time to time, but are, as a rule, confined to a narrow area.

FOLKLORE AND FABLE IN THE SUDAN†

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IN all continents and countries the superstitious observance of magical pagan practices, whose origins may have long been forgotten, dies hard. In England, though the "Jack-in-the-Green" has virtually disappeared, the Maypole still lingers on. We still bow to the new moon, throw salt over our shoulders, take omens from magpies and are reluctant to sit thirteen at a table. . . . The names of the Norse gods are enshrined in our days of the week: even our most sacred Christian festivals are said to be in origin the adaptations of pagan ceremonies. In the remoter parts of Europe the vampire and werewolf are hardly dead.

In Mohammedan countries beliefs and observances of this nature are a vivid reality in the lives of multitudes. The reasons are not far to seek. Islam is a later religion and its peoples are generally nearer to their pagan past. It came to the Sudan a thousand years after Christianity reached England. Education has only just begun to influence the bulk of the people. Moreover, the basic literature of the religion itself incorporates a great quantity

† In its original form this article appeared (*Sudan Notes and Records*, IX) as a review of Dr. Zwemer's *Animism in Islam* (S.P.C.K., 1920). It has now been rewritten but still derives in great measure from his book, particularly on the ritual side. The account of the *Qarina* is taken entirely from him as are the quotations from the Koran and the Traditions.

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of the magical and animistic beliefs which preceded it. The Koran and the Traditions are full of examples and such beliefs, coming from such a source, passed easily into the writings of the secular authors.

The extent to which marvel and superstition became a matter of course even among the educated is well shown in such a compilation as Damiri's *Book of Beasts*. On the same plan as the old bestiaries, which may have been modelled on it, it deals with all animals, birds or fishes, known or reported, and the nature and properties of each. If information is required on the common cat, the flea or the mermaid, Damiri will supply it. But he does not confine himself strictly to natural history alone. One thing leads to another and his pages contain the specific and sometimes very odd remedies for all human ills. If you dream of a black woman or of a cat with three white kittens, Damiri will supply the interpretation. History blends easily with fable; he gives a short history of the Caliphate, an account of what passed between Solomon and Bilkis, the parentage and conquests of Alexander the Great, Lord of the Two Horns, and the story of the Seven Sleepers. It is all very entertaining, and if there is a high proportion of the magical and marvellous he had Koranic authority for their reality.

As is well known, Mecca and its ceremonies enshrine a vast amount of old ceremonies and beliefs which the Prophet took over and adapted. The Pilgrimage itself is a survival from the Ignorance. The idols, Hobal, el Uzza and the rest, were destroyed, but the House remains and the Black Stone is still an object of veneration. The *ihram* perpetuates the old ceremonial garment of pagan times, and the pilgrims of to-day still run between the hills and stone the devils in the valley of Mina.

The most obvious example of animistic belief incor-

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porated in the Koran and the one which opens the door widest to the magical and supernatural, is the belief in the Jinn which to the Mohammedan throughout the world are an ever-present and teeming reality. Their hold on the popular imagination is well shown in the *Arabian Nights* which are full of them. There, however, they are not only destructive, malicious or terrible, but at times may be comic and almost playful, though always hideous as gargoyles. A good instance is that engaging creature the Simurg with his peculiar methods of propelling himself through the air, and further examples occur in the description of the Kingdom of the Jinn in the story called *Heart's Miracle, Lieutenant of the Birds*.

There is repeated Koranic testimony for their existence, as in Ch. LV, 14: "He created men of crackling clay like the potters: and He created the Jinn from smokeless fire"; and the whole of the Chapter of the Jinn, LXXII. According to Tradition they were created of fire many ages before Adam; come, in the order of Nature, between angels and men; are believers or unbelievers, capable of salvation or damnation. The Prophet was visited by them, visited them and preached to them. Like the Wandering Jew, they live through countless ages; one told Mohammed how when Cain killed Abel he was still a boy; how he had encountered all the prophets, Noah, Hud, Abraham, Jethro, Moses, and last of all, Jesus, son of Mary, who had bidden him: "If you meet Mohammed give him my salutations." A somewhat similar figure, of great interest, is Khidhr Iliyus. Identified perhaps with Elisha, he is believed to have talked with Moses and to be alive to-day. He is mentioned by Lane as supposed to frequent the Zuweilah Gate in Cairo and to appear to men, often as the bringer of good luck or as the restorer of lost possessions. In Iraq to-day he commands firm

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belief, and in 1921 appeared in the desert to the west of Mosul, coming to an Arab encampment in the guise of an ancient dervish, with a long beard and a mighty staff. He asked for food and slept; and waking in the morning found his staff missing. Search was made, and it was found that one of the boys had taken it to tend the flocks. He cursed him, saying that every animal it touched should die. Shortly after, the terror-stricken boy rushed into the camp saying that fourteen of his goats had died before his eyes. The old dervish seized his staff and disappeared into the wastes, and that day the boy died also.

The Jinn aid diviners by listening to the secrets of Heaven. It is related in a tradition from Aisha that "the angels descend in rainclouds and mention what has been decreed in Heaven. Then the devils listen stealthily and reveal what has been said to diviners, and they add a hundred lies to it out of their minds." The shooting stars are used to stone them. "The jinn steal the tidings and carry it to their devotees and the stars are thrown at them"; or, "God created these stars for three purposes; to be an ornament of the sky, to be used as stones against the devils, and as signs to guide people. Whoso interprets them otherwise is in error." "He who goes to a sorcerer to ask about a matter, his prayer will not be accepted for forty days."

They have a special connection with certain animals, particularly with snakes, and many stories are related of men befriending snakes or tending their dead bodies and discovering that they had unwittingly befriended the Jinn. This recalls the belief in werewolves which is widespread in the Sudan, hyenas and crocodiles being the animals usually so inhabited. I have been told how a man had been fishing for crocodiles in the White Nile with the *bedenga*, a kind of crocodile hook. He hooked what was

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evidently a large and powerful crocodile which eventually broke his line and made off, carrying the *bedenga* with it. Shortly afterwards, the fisherman, having occasion to go to Singa, was entertained by an acquaintance who lived in the vicinity and whom he found suffering from a serious wound in the jaw. The guest retired for the night and was amazed to see, hanging on the wall of the room, what he was convinced was his own *bedenga*. Terror-stricken, he could not close his eyes all night. In the morning his host, seeing that something ailed him, and having discovered by questioning what had disturbed him, confided to him that he was wont at intervals to change himself into a crocodile and that it was indeed he who had been hooked by the fisherman.

The same belief came to light in a murder case in the Fung Province. The accused pleaded guilty but urged extreme provocation and self-defence. He told how the deceased, a notorious wizard, had sought his sister in marriage, and how when she refused him he had put a spell on her so that she gradually wasted away and fell into seizures when she would howl like a hyena and call out the wizard's name; how she had gradually faded away till she died, and they had carried her out and buried her, and how as they returned from the graveside, his younger sister, seized with the same spell, had started to howl. Goaded beyond endurance, he had rushed to the wizard's hut to compel him by threats to remove the enchantment. As he passed through the doorway in the fence, the wizard changed to the form of a hyena and charged; with his spear he split its skull as it charged, and the women, hearing his shrieks, rushed up and covered him with clothes to hide the tail which vanished as the spirit passed. "He died from a spear-wound on the very top of his skull, and could I have inflicted this had he

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been a man standing on his two feet ? ” Graybeards and sheikhs testified to the wizard’s possession of such powers, and though the law punished him, the slayer was regarded by general opinion as a public benefactor who had ridded the world of a pest.

Belief in such were-animals is common in the pagan south, and has been reported from many other parts of Africa. In the northern Sudan the incoming Arab tribes may have inherited it from the aborigines whom they absorbed. The *ba’ati*, or ghoule of Kordofan, is of a rather different category, resembling the true jinn.

A much-debated point was the possibility of marriage between human beings and the Jinn. Damiri discusses the point at length and, on the strength of the Koranic text, “whom neither man nor jinn has deflowered,” decided that it can occur. The belief occurs in the Sudan. In Omdurman there are said to be women who have never been able to get married because of the belief that they have had intercourse with the Jinn, and I am further informed that there are families in the Sudan who are supposed to have Jinn amongst their ancestors who can be invoked by them to aid them in their enterprises, somewhat in the manner of Aladdin. There is also a story ascribing the original inhabitants of Suakin to a union between the White Jinn of the Sea and seven beautiful damsels who were being taken from Abyssinia for the special delectation of the Sultan. Their ship being wind-bound, they were allowed by the Wazir in charge of them, as a relief from the monotony of shipboard, to spend the night on the apparently deserted island, where their charms fell victim to the invisible spirits of the sea. Traditionally, the mother of Bilkis, that Queen of Sheba who visited Solomon, was a *jinniya*, while the mysterious Dhu’l Qarnain was similarly born.

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Two kinds of being are mentioned by Crowfoot (*Sudan Notes and Records* II.) as believed to inhabit the Nile. Of these the *banat el hur* seem to be less than jinn and more akin to our mermaids: the "angels of the river" to be more than jinn and more like to the orthodox angels.

In general, the Jinn inhabit the deserts, deserted buildings and empty houses, outbuildings and privies. A lemon in the house will keep them away; whistling, which is therefore ill-omened, may call them up. Like the angels they may be visible to animals while invisible to man. A tradition records that the Prophet said, "whenever you hear the braying of an ass, seek protection with God from Satan because it will have seen a devil; and whenever you hear the crowing of a cock ask God for his favour because it will have seen an angel." Incidentally, the Islamic bar on pictures relates to the angels, being based on a tradition that the angels will not enter a house containing a dog or a picture.

Much of the prayer ritual is said to be connected with the necessity of keeping at bay these ghostly enemies. Dr. Zwemer puts forward the theory that ablution was to free the worshipper not from bodily but from demoniac and supernatural pollution. It is suggested that the practice of the Prophet in passing his hands outside his sandals to cleanse his feet shows that the object was not to cleanse bodily impurity but to ward off demons. The need of spreading wide the fingers in the prayer, especially with the left hand, and in the *takhlil* or washing of hands to prevent demons from lurking between the fingers, is given as a further instance of the same thing; and the danger of the occupation of the body during sleep is shown by the tradition, "If any of you awakens up from sleep, then let him blow his nose three times. For the devil spends the night in a man's nostrils."

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Similarly with the *Sutra*. According to tradition, a Moslem cannot perform his prayer without the *Sutra* or some object between him and the *Kibla* in order that nothing may harm him by passing in between. The word means something that covers or protects, and it is clear from the traditions that it is protection against demons that is required. The Prophet, according to various accounts, used either a stick or a spear or his camel saddle, sticking them upright before him when he made his prayer. A quotation given from Muslim is very definite : " If any of you pray, do not allow anyone to pass between him and the *Sutra*, for it protects from the demons," while another from Abu Daud says : " If anyone of you prays without a *Sutra* before him, his prayer is apt to be annulled by a dog or an ass or a pig or a Jew or a *Magus* or a menstruating woman ; if they pass before him they ought to be punished on that account with the pelting of stones."

The *Sutra* is only used in public places. If stones are used they should be at least three in number to avoid any idea that the stone itself is the object of worship. In the mosque the *Mihrab* takes the place of the *Sutra*.

Rules are laid down as to how and where it is lawful to pass one engaged in prayer. When he who prays chooses an unexposed place and, although there is room to pass behind him a man deliberately passes in front of him, the sin is on the passer-by and not on him who prays. But if he chooses a public place in preference to one which is less exposed, and a man passes in front of him deliberately, it is accounted sin to both ; or if it is impossible to pass behind, the sin is on him who prays ; while if he is obliged to pray in a public place and there is no room to pass behind him it is accounted sin to neither.

The forming of ranks in the Mosque prayers is of great

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importance, not only that the actual ranks shall be formed but that the worshippers shall stand so close to each other that nothing can pass between them, each man placing his shoulder in touch with the man next to him.

A most interesting development of the belief in spirits is the doctrine of the familiar spirit or *qarina*, which Dr. Zwemer enunciates as follows: "Among all the superstitions in Islam there is none more curious in its origin and character than the belief in the *Qarin* or *Qarina*. It probably goes back to the ancient religion of Egypt, or to the animistic belief common in Arabai as well as in Egypt at the time of Mohammed. By *Qarin* or *Qarina*, the Moslem understands the double of the individual, his companion, his mate, his familiar demon. In the case of males a female mate, and in the case of females a male. This double is generally understood to be a devil, *shaitan* or *jinn*, born at the time of the individual's birth and his constant companion through life. The *Qarina* is therefore of the progeny of Satan."

Unlike many of these Islamic beliefs, this of the *Qarin* depends not upon the traditions but on the Koran itself, as is shown by the passages Dr. Zwemer quotes. Thus, from the Sura of the Women: "Whosoever has Satan for his mate (*Qarin*), an evil mate has he": from the Gilding: "And whosoever turns from the reminder of the Merciful One, we will chain to him a devil, who shall be his mate": from the Ranged: "A speaker amongst them (those in Paradise) shall say, 'Verily, I had a mate who used to say, 'Art thou verily amongst those who credit? What, when we are dead, and have become earth and bones, shall we surely be judged?' He will say, 'Are you looking down?' and he shall look down and see him in the midst of hell. He shall say, 'By God, thou didst nearly ruin me.'" From these passages it is

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plain that the *Qarin* is regarded as the man's evil spirit through life, tempting him to destruction, particularly in the way of disbelief in Islam, and being judged with him at the Day of Judgment. A tradition is also quoted : " Said the Apostle of God, ' There is not a single one of you but has his *Qarina* of the Jinn and his *Qarina* of the Angels.' They said : ' And you also, O Apostle of God ? ' He replied : ' Yes, I also, but God has helped me so that she does not command me except in that which is true and good.' " According to Mohammedan tradition, Christ had a *Qarin*, but because he was sinless and Satan was unable to touch him at birth, his *Qarin*, like that of Mohammed, was a good one.

The effect of this belief on popular superstition is given by Dr. Zwemer as follows : " The general teaching is that all human beings, non-Moslems as well as Moslems, have their familiar spirit, who is in every case jealous, malignant, and the cause of moral and physical ill, save in so far as his influence is warded off by magic or religion. It is just here that the belief exercises a dominating place in popular Islam. It is against this spirit of jealousy, this other self, that children wear beads, amulets, talismans, etc. It is this other self that through jealousy, envy and hatred prevents love between husband and wife, produces sterility and barrenness, kills the unborn child, and in the case of children as well as adults is the cause of untold misery." Various examples are given of the effect of these superstitions upon the ignorant in Egypt. " A woman never dares to leave her infant child alone for fear of the *Qarina*. The growing child must not tramp heavily on the ground for fear he may hurt his *Qarina*. On no account must the child be allowed to go to sleep while weeping. Its every whim must be satisfied for fear of its evil mate. It is the firm belief in Egypt that when

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a mother has a boy, the *Qarin* (masc.) has also married a *Qarina* (fem.) who at that time gives birth to a girl. This demon child and its mother are jealous of the human mother and her child. To pacify the *Qarina*, they sacrifice a chicken, which must be absolutely black and sacrificed with the proper ceremonies. It is impossible to see the *Qarina* except in one way. Following a Jewish superstition, a man may see evil spirits by casting the ashes of the foetus of a black cat about his eyes, or by sprinkling these ashes around his bed he can trace their footsteps in the morning." An authority is quoted from North Africa that the *Qarina* endeavours to prevent its mortal mate getting married, because it sleeps with its mate and has relations during sleep, as is known by dreams. This appears to be a parallel to the Sudanese belief in *bint iblis*.

It is suggested by Dr. Zwemer that the origin of the *Qarina* may perhaps be found in the ancient Egyptian belief in the "Ka," in which case Egypt and perhaps the Sudan, might be expected to be particularly receptive to it. The belief undoubtedly exists in the Sudan, but perhaps not to so great an extent as in Egypt. For instance, cursory questioning elicited no suggestion that the sex of the spirit varies with that of its mortal companion. Similarly, one might expect to find it used as an excuse for wrong doing, "I was tempted by my *Qarin* and succumbed." In any case, it is a subject which would well repay investigation.

That much ingenuity has been devoted to the means of guarding against ghostly influences is not to be wondered at. Charms, amulets, and talismans provide the usual weapons, the simplest charm being an amulet containing an appropriate verse or chapter of the Koran. More elaborate forms often of the Abracadabra variety, are common and may serve many purposes, to guard against

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spirits, ward off illness or the Evil Eye, or, as in a good example given in *Sudan Notes and Records* (I.1.) to "bind" the senses of the rulers so that they may be blind to the sedition brewing round them, and powerless to prevent it. This specimen, with its sounding invocations of Dosem, Hosem and Brasem, and its quotations from the Koran, is an excellent example of its kind. As is there pointed out, "binding" of this kind is closely associated with the magical tying of knots which is referred to in Chapter CXIII of the Koran, the Daybreak: "I seek refuge in the Lord of the Daybreak from the evil of what he has created: from the evil of the night when it cometh on and from the evil of the blowers upon knots." It is a well-known practice in the Sudan. A certain sheikh who had involved himself in an awkward situation (incidentally he was a member of the queer sect of Abu Jarid) was found by the policeman who had been sent to fetch him, sitting stark naked in his hut, endeavouring to disembarass himself by blowing on a piece of knotted string.

An everyday charm in the Sudan is the *Biduh*, the ANE commonly written at the top of letters to ensure their safe arrival. It is said to be derived from el Ghazali's magic square, but to the popular mind *Biduh* has become a kind of guardian spirit. The spelling is the alphabetic value of the numbers.

A much-dreaded figure, against whom charms are much in vogue, is *Umm es Subyan*, the ghost witch whose special delight is to afflict mothers in childbirth, or to cause sterility. The translation of a common Egyptian charm against her is given by Dr. Zwemer. After the customary invocation to God and the Prophet, it proceeds: "But after this, it is related of the Prophet of God, Solomon, son of David (peace upon both) that he saw an old woman with hoary hair, blue eyes, joined eyebrows, with scrawny

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limbs, dishevelled locks, a gaping mouth from which flames issued. She cleaved the air with her claws and broke trees with her loud voice. The prophet Solomon said to her, 'Art thou of the Jinn or human? I have never seen worse than you.' She said, 'O Prophet of God, I am the mother of children (*Umm es subyan*), I have dominion upon sons of Adam and daughters of Eve and upon their possessions. I enter houses and gobble like turkeys and bark like dogs and neigh like horses . . . and represent everything. I make wombs barren and destroy children . . .' Then Solomon (peace upon him) seized her in anger and said to her, 'O cursed one, you shall not go before you give me covenants for the sons of Adam and daughters of Eve, and for their wombs and for their children, or I will cut you with this sword.' She then gave the following :—

THE FIRST COVENANT

"By God, there is no God but he, the Profiter, the Harmful, the possessor of this world and the next, the Life-giver, the Guide to the misbelievers, the Almighty, the Dominant, the Grasper, from whom none can escape and whom no one can overcome or defeat, I shall not come near the one upon whom this amulet is hung, neither in travel nor in sleep, nor in walking, nor in loneliness, and God is witness to what I say, there is its seal, etc."

Many kinds of madness are held to be caused by spirit possession and recourse is had to *fekis* for a cure. One method described by Crowfoot (*Sudan Notes and Records* VI) consists of a severe preliminary thrashing, with a green palm stem inscribed with Koranic and cabalistic texts. The object of this is to impress the *Feki's* personality upon the patient. When this has been achieved, treatment takes the form of drinking water which has been used to wash off the ink in which Koranic texts have been written, reading portions of the Koran to the patient and after each phrase or sentence spitting or blowing at him

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so that the spirit of the spoken word may reach him ; and then asking him questions to test his mentality and telling him to do things which require thought. The method here is clearly psychological though there is some doubt as to whether the beating is administered in theory to the patient himself or to the spirit which possesses him. In many cases the latter is the belief and terrible effects may result.

In the first of two cases recorded from Kordofan (*Sudan Notes and Records*, III), a girl of sixteen after being fumigated with pepper and branded on the head and neck, was flogged by the operator for four days with a whip to which a piece of tin was attached. He then throttled and killed her, his explanation being that " my jinn and her jinn entered on a struggle for mastery. Mine in me was throttling hers in her and vice versa. She was *majnun* and I was *majnun*. Her jinn overcame my jinn. Hers killed her because its demands were refused." In the second case, a Nuba operator flogged a boy to death ; his explanation being that the spirit finding itself unable to remain in possession owing to the flogging came out of the boy's mouth and broke his neck.

The *Zar* or exorcism of demons is widespread throughout Islam. Various descriptions are given. It appears that it is always or nearly always performed by women on a woman ; that drumming and incense are used to produce hysteria, that sacrifice of a sheep or fowl is an essential part of the ceremony, that in many cases the patient from whom the evil spirit is to be driven must ride the sacrificial animal round the circle, and must often drink and be sprinkled with the warm blood. The state of hysteria induced in such circumstances may be imagined ; it is said that several cases have occurred in Omdurman during the past twenty years of the patient either killing

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herself or inflicting very serious self-injuries in her frenzy. The practice is supposed to be forbidden, but is very difficult to stop as it is always kept very secret. It has been suggested that it is sometimes accompanied by promiscuous sexual orgies, but for this there is no positive evidence.

The belief that trimmings of the hair and nails, being living parts of the human body, are full of "soul-stuff," and that it is therefore dangerous for their original possessor if they fall into the hands of an enemy who may use them for magical purposes is world-wide and common in Islam. Less care is generally paid to hair trimmings, but it is the almost universal custom that nail trimmings must be carefully collected and buried in some safe place. There is a traditional order in which the nails should be cut, though this varies in different countries, generally the little finger first, then the middle finger, the thumb, the ring finger, and last the index finger, the *sababa* or finger of cursing. The belief that if shorn hair or nail trimmings are left on the ground and trodden on, the original owner will suffer from a headache, is a common one in the Sudan.

During the pilgrimage, as soon as the pilgrim has put on the *Ihram*, or pilgrim dress, he must abstain from cutting hair or nails, on pain of an expiatory fine. As soon as the pilgrimage is completed, he must shave his head and cut his nails, offering a special prayer. The sale or artificial use of human hair is unlawful. According to tradition, God denounced a curse upon both a *Wāsila* and a *Mustawasila* (a woman who unites the shorn hair of one woman to the head of another to make her hair appear long, and the woman to whose head such hair is united).

Sympathetic magic of the usual form is common in the Sudan. One form is to write the victim's name on

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a piece of wood which is then either burned, buried or cast into the river, the victim perishing quickly or slowly accordingly.

More elaborate is the form described in one of the old Fung stories when el Higazi, to put a spell on King Adlan, took soft clay, fashioned it into the form of the King and then baked it in the fire until it cracked.

As all the world over, spitting commonly has magical power and is used to convey *baraka*. On one occasion I had been able to perform a service for a well-known holy man. On taking leave of me he said he wished to give me his blessing, and taking my hand in his, recited a long and rather moving prayer: then pulling my hand and arm so as to bring my head forward, before I realised what was going to happen, he spat quickly thrice on the top of it.

The more important epochs of the individual's life are marked by curious ceremonial. Seven days after the child's birth, the *Aqiga* sacrifice must be made, an animal sacrificed and the child's head shaved. It is at this time that the child receives its name.

The circumcision procession is familiar, with the boy mounted on a horse, with a sword, in king's robes. The marriage customs of the northern Sudan, with their strongly pre-Islamic character, have been described in detail by Crowfoot (*Sudan Notes and Records* V). A peculiar feature is the investiture of the bridegroom by an old woman with the *jirtiq*, the special ornaments of his status. These consist of particular beads, which are first prepared by being dipped in water, milk and flour. He must wear a bracelet and carry a whip and a sword. His robes are those of a woman. The bride also wears the *jirtiq* which are not put off for forty days. Other features of the ceremony are the tearing off of seven

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tassels from the bride's *rahat* and the untying of a cord which has been knotted tightly round her waist.

The term *jirtiq* is also applied to the ornaments worn at circumcision. They are worn on one other occasion, by the woman in the seventh month of her first pregnancy, and retained until the child is born.

A feature of the Islamic burial ritual is the instruction of the deceased to enable him to reply correctly to the interrogating angels, Munkar and Nakir. There is a period of suspense, *el Barzakh*, between death and resurrection. Especially interesting is the holy night, *Nusf Sha 'ban*. The belief is that on that night the branches of a celestial tree, each of whose leaves represent a human being, are shaken, and that those whose leaves fall are destined to die in the coming year.

The belief in the Evil Eye is too familiar to need much comment. The danger of commenting on the health or beauty of a child is well known; but the same feeling also applies to animals, and in the eyes of the unsophisticated makes agricultural shows unpopular as it is obvious that the winning animal which has been the cynosure of every eye will probably be overtaken by misfortune. The same belief may be the cause of the women's reluctance to name their husbands to a third party; they prefer to call him as the father of his children, Abu Mahmud or Abu Hassan as the case may be. It may also account for the well-known Semitic prejudice against anything in the nature of a census, though that is also much disliked in many cases to-day as the probable forerunner of conscription. The erection of an animal's skull on a pole by a field of growing crops is also a device to avert the Evil Eye†. (Trans. of E. Powys Mathers).

Pre-Islamic ritual for the control of natural phenomena is still common. In times of drought, a bull is commonly

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sacrificed. In some parts of Islam the washing of pebbles in water is practised to bring the rain, but this has not so far been reported from the northern Sudan, though in the pagan south rain stones are a frequent feature of the rain-making ritual. Another ceremony reported by Jackson (*Seed Time and Harvest*), Sudan Notes and Records III), is the killing of two pigeons which, together with two beetles, are hung up in a new waterskin, beneath which prayers are offered up by a number of men. Or seven beetles may be left to starve under a copper pot for seven days, in charge of a *Fellata fekih*; if the rain comes before the expiration of the period, the beetles are released.

It may be remembered that to enquire as to the likelihood of rain is not only fruitless but the definite mark of an unbeliever. This is well set forth in the *Arabian Nights* in the Tale of Sympathy the Learned (Night 282). Sympathy was being tested as to her learning by the sages of Baghdad before the Caliph, and was asked by the astronomer: "O slave, do you think we shall have rain to-morrow?" whereat she exclaimed: "O Prince of Believers, I beg you to lend me your sword that I may cut off the head of this astronomer, who is an agnostic and an unbeliever. . . . I must teach you, O astronomer, that there are five things which only Allah knows; the hour of death, the fall of rain, the sex of a child in its mother's womb, what will happen to-morrow, and the place of death."† The date of the day of resurrection is sometimes given in place of the last.

The thorn tree, covered with countless rags, the cairn of stones by the wayside, are familiar to all. These may be, as Dr. Zwemer suggests, relics of the stone and tree

† Trans. of E. Powys Mathers.

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worship prevalent in early Semitic religions, of which the Black Stone of Mecca is a prominent example. Several instances of such cults have been recorded by MacMichael from Darfur. But in the Mohammedan Sudan such trees are often associated with the tomb of some holy man, and it is likely that in most cases there is, or was, a tomb nearby.

“ KARAMA ”

By W. R. G. BOND

Late Sudan Political Service

Thanks are due to the Committee of *Sudan Notes and Records* for permission to reprint this article.

READERS of accounts of savage tribes or savage customs, can usually scent ahead the trail of blood across the page.

Whatever the occasion that is being described, the reader feels sure that before the tale is done some wretched goat or other animal is “ for it,” usually under circumstances the mere record of which produces a feeling of nausea. And yet, when one meets individuals of the tribe, they are often cheery, kindly, and human enough. The writer has known a native turn his head away while a wounded gazelle was being put out of its pain, and a native woman burst into tears when an accident to a camel necessitated its being shot.

Why then is every milestone of native life spluttered with the blood of a publicly-butchered animal ?

The people of the Northern Sudan are by no means vegetarians ; they like a meat diet regularly, if not daily. In the bigger towns a profusion of butchers have sprung up, in whom a well-developed desire for profit and a disinclination for steady labour seem to supply the necessary qualifications for their trade.

The vast majority of the people, however, do not live in the towns, and among them animals are slaughtered

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for food by the householder, on the occasion of a birth in the family, a circumcision, or a wedding, on the arrival of an honoured guest, on the anniversaries of holy days, on the building of a house, or on the inauguration of any enterprise.

But in every case there should be a gathering of the neighbours, and the meat is free to all comers to enjoy.

A man who killed a beast to indulge his own private hunger for meat would be thought a curmudgeon, and be looked at askance in much the same way as a man would be in England, who had the reputation of drinking in private ; in fact the ceremonial of eating meat in the Sudan has much in common with that of drinking alcohol in England.

The idea of the sale of meat, excepting in the big towns, is still foreign to all but the most sophisticated, and many Europeans have been put aback by the calm refusal of an Arab to sell them for meat an animal from his numerous flocks on any consideration whatever. If remonstrated with, the Arab may reply, “ You are a Government Official, and as such I am in your hands. If you wish to take one or all of my herds, I will not resist, but if you ask me if I will sell you an animal for meat, my reply is that I will not.”

Should the official dismount at the Arab's encampment, one of the said animals will in a few minutes be hanging on the nearest tree, being cut up for meat, and the host would be shocked beyond measure at the offer of money for it.

The killing of an animal is a ceremony and to be treated as such, and not as a mere matter of barter or trade.

This is perhaps because the animals themselves form the standard of wealth or coin of the realm ; the people in the world are few who realize that money itself is only

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a matter for barter of fluctuating value as against commodities, and who would not be puzzled if a stranger remarked to them, “ I wish to buy five sovereigns from you, what will you take for them ? ” As a matter of fact this is what every advertiser does, and we are apt to resent his blatant insistence, much as the Arab sometimes resents the attempt to part him from his sheep.

It may of course be urged that the practice of ceremonial slaughter is definitely laid down by the Mohammedan and other religions, but there can be little doubt that in this, as in many other matters, religion has only regulated and codified previous custom. One likes to think that the great founders of religion were partly guided by sympathy with the victim in directing that if an animal is to die for food it should at least be killed in the most instantaneous and humane way known to the times.

The Sudan, or at any rate the northern half, affords few if any instances of elaborate ceremonies in connection with the dairy or the cornbin such as are found in many other countries, but the slaughter of an animal is never without its ritual formality. This may be because the natives are still largely in the pastoral stage of civilization, and are only on the threshold of the agricultural phase ; but there is a fundamental difference between meat and grain, which has been overlooked by students of the origins of sacrifice and similar rites.

The consumption of milk or corn is a spending of income, the slaughter of an animal is a draft on capital. From a store of grain a few handfuls may be withdrawn without much apparent diminution of the supply, and the deficit may be made good at harvest time by the addition of new grain. An animal, on the other hand, once dead is dead for ever, and no other animal has quite the same individuality, or can ever exactly fill its place.

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It may be suggested that the three fundamental facts in which the ritual of slaughter has its earliest origins, are as follows :

1. That a living animal is indivisible ; before the smallest piece of meat can be used the whole animal must be dead. You can draw two handfuls of corn from your supply every day of the year and only use up a few bushels but to draw two handfuls of meat daily would in a year exhaust a herd of 365 head, and the total meat killed would amount to tons.

2. That an animal provides, as a rule, too much meat for an individual and his immediate household dependents.

3. That meat decays rapidly, and must be used at once ; it cannot be stored unchanged for future use.

It follows from these simple physical facts that, if there is to be no waste, it is necessary to call in the neighbours whenever an animal is to be killed, and, conversely, if there is to be no gathering there should be no meat.

The killing of an animal is an affair in which all the neighbours are interested, and the natural gatherings of friends and relations at the crises of a man's life are naturally made excuses for butchering an animal.

In the intervals a man must go meatless, or himself visit a neighbour, who owing to some domestic ceremony is taking his turn at killing an animal for the general enjoyment of himself and his friends.

One may imagine that reputations for hospitality, which are so highly valued among the Arabs, are more readily built up by a punctual discharge of this duty of taking one's turn at providing one's neighbours with meat, than by altruistic generosity to casual strangers.

At any rate it would seem that the killing of an animal almost always becomes associated in a man's mind with

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reunion of friends and relations in celebration of some occasion, usually happy, for such occasions are those which are naturally made an excuse for killing an animal, and hence perhaps arises the idea that any gathering is incomplete without some animal being killed.

One may perhaps get nearest to the Arab train of thought by picturing the case of the English country gentleman of the old school, whose grandfather has laid down a small but choice bin of Port. The parallel is fairly close in many points. The Port has a certain sentimental family value ; it was laid down, perhaps, when the present squire was born, and by maturing in the family cellar has acquired a certain character which is exactly shared by no other Port in the world. Once a bottle is opened, it can never be replaced by anything exactly the same ; a new supply may be laid in, but that particular bin is by one bottle nearer the end of the supply. It must not be wasted in everyday use, or by selfish and solitary indulgence. On just such an occasion as would prompt the Arab to kill one of his animals, we can hear the Squire whisper to the family butler, “ It’s Christmas ” or “ Mr. George has got a fortnight’s leave from Flanders and will be home to-night,” or “ It is not every day an heir is born to the old place,” or “ Sir John is dining to-night, he always says there’s nothing quite like our ‘47.”

One has only to think of a War profiteer driving up in a motor and blustering, “ I hear you have some old Port, I will buy a dozen, name your price,” to get a very fair idea of the feelings of an Arab who does not want to sell a sheep to a stranger. The corn supply of the Arab is more like a cask of beer from which a jugful can be drawn whenever required and which when finished can be replaced with a very similar brew, little excuse save hunger

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in one case or thirst in the other is needed to justify its consumption.

Let us push our fancy further :

We can imagine our squire as he sips his Port saying, “ Ah, I wish my old grandfather were alive now, he'd know how to deal with these rascals who put barbed wire in their fences,” or perhaps his hand shaking as he puts down his glass and turns his face from the light, “ The last bottle I opened was the night poor Will left for France ; oh God, if we could have him back here now.” But Will will never come back and the tragedy of civilization is that those present know it, and know that there is no room for doubt or question or for any comforting ray of hope.

Not so primitive man, for with him it is about equal odds, which of two absent members of the family circle may be back first, the one who left on a journey three months ago, or the one they buried in three pieces after the last intertribal discussion about boundaries.

So that in a primitive community, where no one, if he could help it, would be absent from a social gathering and so lose his share in the meat, it would seem quite natural to set aside a part of the feast for a relation, who was absent from that party for the first time for many years for the very good reason that he was dead, but whose familiar appearance and characteristic gestures remain a vivid picture in the minds of all present.

One is sorely tempted to follow this too easy line of speculation. The share of the feast set aside at a family gathering for the dead relation—for dead ancestors—for the spirits of dead ancestors—for the spirit of the tribe—for the tribal god, who is supposed imperceptibly to take part in the feasts of the tribe as a pledge of communion with them and sympathetic interest in their future welfare.

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At least it seems probable that some such association of ideas in the long past gave rise to the feeling that the killing of an animal was not merely a necessary stage in getting meat to eat, but had a certain occult significance which demanded a due observance of ceremony.

The ordinary meal is a very different affair: the food is monotonous and often insipid and badly cooked; it is usually eaten without dallying and as there are no courses there are no intervals for pleasant social intercourse.

It is a business to be got through merely to appease hunger, and native custom excuses a man who is eating from the usual displays of formal politeness, not, it may be presumed, because he is enjoying himself, but because he is engaged on a rather boring business, and the sooner he has got it over and done with the better, and the less chance that others will eat his share while his attention is wandering. No doubt the dullness of ordinary meals enhances the interest of social occasions when meat is on the board.

So far we have discussed why every occasion of importance is made the excuse for killing an animal for the general enjoyment of the guests. But why is the animal always killed in the most public way and often in a manner characterised by the most revolting details?

Human beings seem to enjoy having their feelings harrowed and their emotions stirred even unpleasantly, and the more monotonous their every-day life, the more they crave excitement. To realize this, one has only to think of the crowds which in any part of the world would crush to see a public hanging, and yet of which not one single member would enjoy any pleasure in the actual scene: or to think again of the delight of children in making their flesh creep by listening to ghost stories in the dark.

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The fact seems to be that it is pleasurable to have the emotions stirred as a whole, even though the particular emotion excited at the moment is painful. The feeling of exhilaration lasts after the unpleasant stimulus has passed, and it seems that the human mind can turn the emotions almost at will into any desired channel, whatever the exciting cause may be.

The young fox-hunter with his cheeks smeared with blood of the first cub at whose breaking up he has assisted, or the boy who has just kissed the dripping knife-blade and sworn “never to kill or cause to be killed any hawk,” rides home in a joyous glow of satisfaction that he can now consider himself admitted to the glorious brotherhood of sportsmen; he does not think of the messy details of the time-honoured ceremony of initiation, which is perhaps little less disgusting than many a savage ceremony and perhaps as old; for as cattle tending is older than agriculture so is hunting older than both.

It seems that it is this ability to turn emotions excited in one way into quite other channels, that explains the long-observed connection between cruelty and lust and even religion. In no other way can one account for sensitive persons surrounding themselves with horribly-realistic representations of the most haunting tragedy in the world’s history, and dwelling only on the comfort and hope thereby symbolized, while blinding their eyes to the physical pain and mental anguish actually portrayed.

Blood is of a startling colour and spurts rhythmically from a severed artery; it is instinctively associated with fear and pain. The spectator at its shedding is sickened and disgusted by the sight, but he is stirred, and the excitement remains after the scene which caused it has closed; he is to use a common expression “taken out of himself” and can fling himself with enhanced zest into

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the mood of the moment. Hence the eventual pleasure derived indirectly from the killing or even torturing of an animal to death ; and hence the wide use of such incidents among savages whenever there are emotions religious or otherwise that need exciting or stimulating.

Here also, perhaps, we have an explanation of the ceremonial use of many things calculated to produce in the first instance disgust, such as the slaverling of others with saliva, or the pelting of friends with dung. The underlying idea of these customs may be this : excite emotion of some kind or another, whether pleasant or the reverse and the emotion once raised may be guided with tact and management into any desired channel. Some of the priestly casts seem not to have been slow in appreciating this characteristic of human nature and to have turned it to their own sincere, if sometimes misguided uses.

Human beliefs are rarely clearly thought out or logical, nor can they be traced as a rule to a single underlying idea. In the offering of an animal to a guest there may be the feeling that by sharing a common meat, host and guest become “ one flesh ” and are bound to each other in ties of mutual interest. Each has gained an ally in a harsh and hostile world, though in some cases it would seem that the bargain does not hold after the meat may reasonably be considered to have had sufficient time to be digested ; three days is considered in most parts of the Sudan to be a reasonable time for a visit, and should an honoured guest prolong his stay beyond this, he has outstayed his welcome and is looked upon as a cadger.

And lastly there is a dramatic finality about death, even the death of a sheep.

If a contract of marriage, an oath of peace with surcease from long and costly struggle, or a pledge of eternal

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friendship is to be ratified, there is always a desire that a fixed and irrevocable sign may be set, as a symbol, that the glamour may not pass, nor estrangement creep in, and that there shall be no fading of the high hopes and warm sentiments that have been formed. Other races may find this symbol in the breaking of a glass which can never again be pieced together, or the blowing out of a candle, whose flame disappears into the unknown and cannot be recalled, but the Arab and with him many a pastoral tribe puts an animal to death, for death is as definite and irrevocable in this visible world as anything we know.

The question that was raised early in this paper has not been answered, but perhaps out of the tangle which is characteristic of all savage and most human reasonings we may deduce :

Firstly, that an animal is slaughtered at every gathering, because originally it was only at such gatherings that man could kill an animal without waste ; for the guests would eat what he could not eat himself, and be morally bound to give him their surplus, when it was their turn to kill.

Secondly, that the utmost play is made with the actual death of the animal, and unpleasant details are often added, in order to produce emotion which can be guided later into pleasurable channels.

The killing of an animal provides food for the guests and indirectly produces a genial mood, more rapidly, more dramatically, and perhaps more economically, than the issue of unlimited beer, not that the latter should be therefore despised or neglected nor should the exhilarating effect of beating a drum be omitted if the maximum of happiness is to be obtained.

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Books suggested for further reading :—

| | | | | |
|-------------------------|-----|-----|-----|--|
| Sir W. Muir | ... | ... | ... | <i>The Life of Mohammed.</i> |
| Amir Ali | ... | ... | ... | <i>The Spirit of Islam.</i> |
| D. S. Margouliouth | ... | ... | ... | <i>Mohammedanism.</i> |
| R. F. Burton | ... | ... | ... | <i>Pilgrimage to Mecca and Medina.</i> |
| De Lacy O'Leary | ... | ... | ... | <i>Islam at the Cross Roads.</i> |
| J. H. Driberg | ... | ... | ... | <i>At Home with the Savage.</i> |
| Sudan Notes and Records | ... | ... | ... | <i>Tabaqat wad Dayfallah.</i> |
| (Vol. VI) | | | | |
| P. H. Lammens | ... | ... | ... | <i>Islam.</i> |

“ When you have passed this portion of the river in the space of forty days, you go on board another boat and proceed by water for twelve days more, at the end of which time you reach a great city called Meroë, which is said to be the capital of the other Ethiopians.”

HERODOTUS.

*“ O thou River, who didst bring forth all things,
When the great gods dug thee out,
They set prosperity upon thy banks.”*

ANCIENT BABYLONIAN HYMN.

PART IV

THE PHYSICAL SETTING

By G. W. GRABHAM, O.B.E.

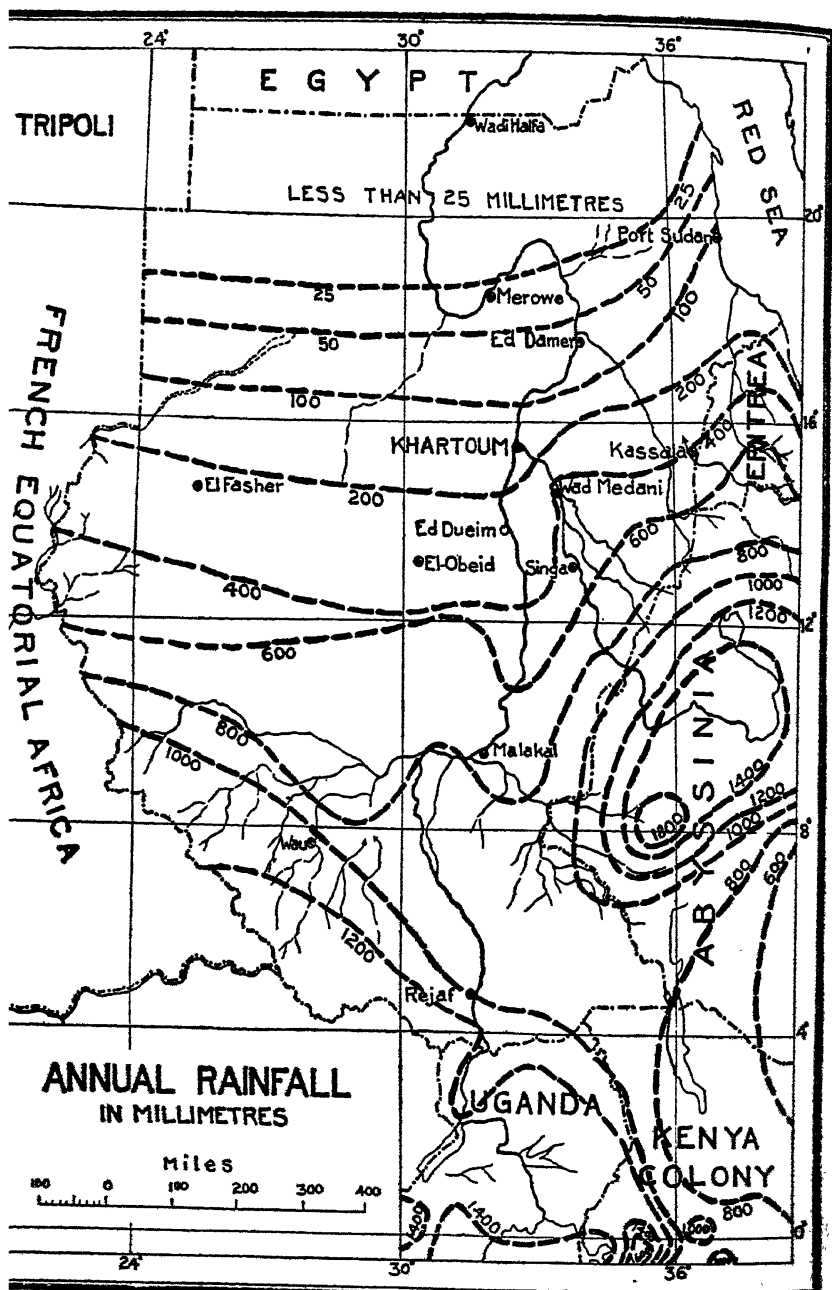
Sometime Government Geologist

CLIMATE

THE Anglo-Egyptian Sudan lies between 22° and 3° North Latitudes, within which the climate ranges from desert in the north and approaches the humid tropics in the south. The desert is bordered by areas of sparse scrub which in turn give way to savannas or tropical grass lands which prevail in the central regions.

Rainfall

The rainfall is the dominating factor and this may be regarded as occurring in a belt which follows the sun from side to side of the Equator. At intervals of years rain falls in the desert, but Abu Hamed may be regarded as the extreme northern limit of the annual rains. As we pass south, the period and the amount of rain increase until in the most southerly part of the Sudan, a double season with a relatively dry interval begins to be recognisable. This is due to the belt of rain passing northwards and then returning. The map on next page shows the average distribution of rain in millimetres. The amounts vary considerably from year to year and this is illustrated in the following table giving the average as well as the highest and lowest totals observed over periods of years.



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| <i>Place</i> | | <i>Average</i> | <i>Highest</i> | <i>Lowest</i> | <i>Period of Years</i> |
|----------------|-----|----------------|----------------|---------------|------------------------|
| Abu Hamed ... | ... | 10.0 | 60.3 | 0.0 | 22 |
| Merowe... | ... | 24.3 | 83.5 | 0.0 | 13 |
| Port Sudan ... | ... | 107.0 | 421.8 | 18.5 | 25 |
| Atbara ... | ... | 73.7 | 241.6 | 0.0 | 24 |
| Khartoum ... | ... | 166.0 | 365.4 | 74.5 | 27 |
| Kassala ... | ... | 330.8 | 487.9 | 135.3 | 26 |
| Fasher ... | ... | 347.8 | 555.0 | 105.9 | 13 |
| Nahud ... | ... | 383.1 | 687.5 | 127.4 | 20 |
| El Obeid ... | ... | 355.3 | 561.1 | 203.8 | 27 |
| Dueim ... | ... | 203.8 | 606.0 | 139.5 | 27 |
| Wad Medani ... | ... | 404.2 | 735.7 | 239.8 | 27 |
| Gedaref ... | ... | 684.8 | 1009.9 | 399.0 | 26 |
| Roseires ... | ... | 768.2 | 1039.3 | 432.8 | 25 |
| Malakal... | ... | 847.5 | 1127.1 | 491.8 | 21 |
| Wau ... | ... | 1105.4 | 1580.8 | 718.3 | 27 |
| Mongalla ... | ... | 921.3 | 1464.0 | 682.6 | 25 |

The table shows that towards the northern limit the rainfall is very unreliable. Some years there is an appreciable amount and in others there may be none or almost none.

The variation from year to year is illustrated by the figures for Khartoum and Singa for the 10 years, 1921-1930, given in the following table :—

| | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Khartoum | 245.8 | 365.4 | 338.8 | 157.6 | 103.1 | 92.0 | 230.0 | 95.3 | 265.6 | 231.4 |
| Singa ... | 538.5 | 594.5 | 591.3 | 653.0 | 525.1 | 444.4 | 534.7 | 568.9 | 682.5 | 522.2 |

Khartoum is at the northern border of rain cultivation, where results are very uncertain, while Singa is in the heart of it, where crops can almost always be relied on. The total amount of rain is the figure given in the records. It is important, yet the distribution of the rainfall in time may be vital to crops. A number of good rains at suitable intervals promote the growth of vegetation, while the same amount of rain in a few heavy downpours may allow the plants to wilt or even die in the longer intervals.

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Barometric Pressure

Space does not permit discussion of this important meteorological factor. There is a diurnal variation in pressure of about 3 mm. It is highest at 9 a.m. and lowest at 5 p.m. and it is important to take note of this when using an aneroid to measure altitudes.

Temperatures (Centigrade):—

| | | | <i>Extreme Maximum</i> | <i>Average Maximum</i> | <i>Average Minimum</i> | <i>Extreme Minimum</i> |
|----------|-----|-----|----------------------------|----------------------------|----------------------------|----------------------------|
| Halfa... | ... | ... | 52.5 | 34.2 | 16.8 | 2.0 |
| Khartoum | ... | ... | 47.0 | 36.6 | 21.4 | 5.2 |
| Malakal | ... | ... | 43.6 | 34.8 | 20.3 | 12.0 |
| Mongalla | ... | ... | 43.5 | 34.1 | 20.7 | 11.0 |

The extremes, $29\frac{1}{2}^{\circ}$ – $126\frac{1}{2}^{\circ}$ F., occur in the desert, while in the more humid south, the range is much less.

Humidity

| | | | <i>January</i> | <i>April</i> | <i>July</i> | <i>October</i> |
|----------|-----|-----|----------------|--------------|-------------|----------------|
| Halfa... | ... | ... | 49 | 25 | 24 | 35 |
| Khartoum | ... | ... | 28 | 15 | 45 | 30 |
| Malakal | ... | ... | 30 | 42 | 85 | 81 |
| Mongalla | ... | ... | 52 | 69 | 85 | 78 |

These figures express relative humidity, a completely saturated atmosphere being 100. They indicate the extremely dry nature of the northern and central Sudan where humidities as low as 5% are occasionally recorded, even as far south as Khartoum.

Sequence of Weather

The general march of the seasons in the Central Sudan, as represented for instance in the belt containing Kassala, Wad Medani, El Obeid, and Fasher, may be regarded as beginning with the rains. The N.N.E. Trade Wind begins to give place to southerly winds in April and there may be small showers of rain. May is usually fairly dry, but the weather becomes unsettled with dust storms. These are the *habubs* which are well-known features of the climate of Khartoum, Kassala and Tokar. They require strong gales and also supplies of dust. The strong gale

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may occur in country where there is no dust and, save for a certain amount of debris, the air remains fairly clear. At a centre of population such as Khartoum, where the surrounding country is cleared of all vegetation and its surface stirred by much traffic both of people and their flocks, so that there are large quantities of dust, the conditions become suitable for the development of these spectacular storms. Kassala and Tokar are in delta areas where the surface of the ground is formed of fine silt. The storms usually come in the afternoon or evening following sultry and rather still conditions earlier in the day. They may be seen approaching with definite fronts formed by series of vortices appearing like great buttresses. The heated air from the surface rises and carries up with it vast quantities of dust, so that the *habub* approaches (usually from the S. or S.E.), as a reddish-brown wall. When the storm arrives, the stillness becomes unsettled and rapidly changes to violent winds occasionally strong enough to cause structural damage to roofs and verandahs. Sometimes the density of the fog is enough completely to blot out daylight. The storm usually does not last more than two or three hours. The wind decreases, the dust lessens and the temperature falls. A *habub* in the afternoon may be followed by another in the evening. During the months of May and June, an average of five a week is not unusual. In June there may be heavy showers, but the rains can only be regarded as setting in, in earnest suitably for cultivation, in July. Heavy showers in June may tempt sowing but most often this leads to disappointment as the plants may wilt and die before any more rain. After the rains have set in and vegetation begins to grow, though violent wind storms continue to occur, there is no dust for them to raise and it may be said that *habubs*

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do not occur after July. Rainy conditions with cloudy skies and humid atmosphere continue through July, August and September. The mornings may be clear but clouds appear as they wear on. By midday there is the promise of a storm which may develop about 16 hrs., after which it may clear for a while towards sunset only to become stormy again later on. These tropical storms, accompanied by strong winds and vivid displays of lightning, are most majestic. An occasional shower may fall in October but this month marks the period known to the people as the *darat*, a few weeks of hot, rather humid weather between the rains and the onset of the Trade Wind in November. This wind (usually from rather east of north) is dry, and with the increase in declination and failing power of the sun, brings the dry days and cold nights of the winter months. The annual vegetation soon dries, crops ripen and are harvested. There is very great variation in the years and it is often averred with considerable truth that in the Sudan there never is a normal season.

The Nile flood is mainly derived from rain that falls on the Abyssinian Plateau and this is remote enough for there to be little relation between it and that of the plains of the Central Sudan. It does not follow that, because there are favourable rains and good crops in the Sudan, there is necessarily a high flood in the Nile.

The rainfall of the Red Sea coast is governed by conditions quite different from those of the Central Sudan. The coastal plain is subject to rain during the winter, from October to February, with the heaviest rain in November or December. The region of these winter rains is limited to the plain and does not extend into the hills where the rain follows the summer régime of the Central Sudan.

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Climatic Change

The magnitude of some Ancient Egyptian remains, as well as the existence of palæolithic implements on the surface of the desert far from the Nile, frequently prompt questions and assertions as to the nature of former climates and the change that has occurred in the rainfall. There is evidence, such as the association of vestiges of Early Man with stream beds and dried-up springs in the desert, which shows that in those remote times the climate over the Egyptian desert was decidedly wet. Coming to historic times it can be said that a dry climate, similar to the present one, has prevailed since the beginning of Dynastic time, say about 5,000 years ago. Records of Nile floods during the greater part of the last 1,200 years exist, and show that there have been no greater differences in the volumes of the floods than have been experienced during the last sixty or seventy years. There have, however, been variations extending over periods of twenty or thirty years. During the thirty years from 1869 to 1898 there were a number of high floods, including the very high ones of 1874 and 1878, while during the succeeding years from 1899 to 1934 the average of the former series has only exceptionally been exceeded until 1934, and this high flood is not very exceptional in comparison with the earlier group of floods. The earlier group includes only one or two very small floods, while such floods, including the almost disastrously low one of 1913, have been fairly frequent during the later group of years. There is other evidence of short period variations in climate in the Sudan, and there can be no doubt that occasionally one rainy season lasts longer and the next begins sooner, so that the intervening dry period is relatively short and cool. Such a variation in the distribution of rainfall, perhaps without any great difference in

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its total quantity may have very widespread effects on the vegetation and the animals depending on the vegetation. Seedlings that are unable normally to attain enough strength to survive the longer dry season are fostered during their early stages and can then withstand greater droughts. A very little more rainfall may very considerably extend the grazing areas on the desert border north of Kordofan and Darfur. There are well centres that yielded abundant supplies fifty or sixty years ago and lately have been almost dry. This may be due to rainfall being less, but there may be other factors. Where the well centre has been abandoned as a result of political changes vegetation grows up and the soil is undisturbed. Possibly a smaller proportion of the rain enters the soil and a large proportion of this is transpired by the plants. Well centres such as Foga, Abu Haraz and Melbis will certainly revive and again become important.

Meteorological data from numerous stations in the Sudan is collected by the Physical Department of Egypt to which the author of this article is indebted for the facts set out. There are numerous publications and a key to all of them exists in *The Nile Basin*, Vols. I, II, III and IV (2 parts), by Hurst and Phillips, Govt. Press, Cairo.

PHYSICAL GEOGRAPHY

The Sudan may be divided into five main physiographic provinces :—

The Desert in the North.

The Red Sea Hills on the East.

The Sand Regions of Kordofan and the West.

The Dark Soil plains of the Central Sudan.

The Red Soil regions of the Tropics in the far south.

From Wadi Halfa nearly as far as Khartoum the Nile is flanked by rocky plains with isolated groups of hills.

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In the north these are almost completely devoid of vegetation but there are occasional falls of rain and, in valleys or the vicinities of hills, a few thorn bushes may exist if they escape the depredations of man. The neighbourhood of Abu Hamed marks the limit of acacia scrub along the wadis and this increases in quantity as we proceed farther south. The desert extends nearly as far south as Khartoum and nowhere within it is there any soil, except in favoured places such as the vicinity of the Nile or other areas that are flooded by streams. It is essentially a region of denudation, and any fine grained material resulting from the breaking up of the rocks is carried away by the wind. There is not enough vegetation to retain it.

Some favoured areas are flooded naturally, but otherwise the crops depend on artificial irrigation. The water must be brought from wells or rivers and put on the land.

The Red Sea Hills, extending between the Egyptian and Eritrean borders, mark the eastern flank of the great Rift Valley in this part of Africa. The Red Sea lies in a sunken trough flanked by hilly regions, with the Nile behind the hills on the west and the Persian gulf behind the hills on the east. The watershed in the Sudan is fairly close to the Red Sea, and on the Arabian side also it seems to be fairly close to the Red Sea. The Red Sea Hills contain impressive mountains of ancient crystalline rock rising to over 7,000 ft., and these are to be regarded as resulting from the gradual erosion of a table land by the ordinary agents: rain, streams, and perhaps wind to a small extent. Among these hills are valleys, and even in the north, enough water is concentrated from the hills to maintain thorn scrub along their floors. The amount of this vegetation increases towards the south and, near the Eritrean border in some of the higher valleys,

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the vegetation is almost luxuriant. The upper parts of some of the higher hills even in the north are more favoured with moisture than the surrounding desert and support a variety of vegetation, including the wild olive. Very distinct from the hills is the maritime plain, ten to twenty miles wide which separates them from the sea shore. It is almost featureless and is mainly formed of detritus carried out by streams from the hills. The coast is fringed by coral reefs, broken at intervals by remarkable inlets which are thought to represent flooded sunken valleys. After rain the maritime plain affords useful grazing and, as a consequence of streams issuing occasionally from the hills, reliable supplies of water exist at a number of places. Small crops are raised on the flooded beds of wadis. The deltas of the Gash and the Baraka near Kassala and Tokar are annually flooded by these rivers and support valuable crops of cotton.

The sand region lies south of Khartoum and extends westwards from the White Nile through Kordofan to Darfur and beyond. There is enough rain for vegetation to fix the sand and, though the form of the dunes is preserved in many places, the sand no longer moves. The sand has come from the north during a former arid period when the desert extended farther south. Wind erosion may be recognised on the northern faces of rocks and of hills protruding through the sand, while there are accumulations of sand in the former wind shadows, against the southern sides of the hills. The sand absorbs all the rain, and the region is practically without drainage. The sand is red, but the colour only extends to a depth of four or five feet. Towards the south, especially in the west, any surface undulations disappear and the sand forms a flat plain with savanna forest.

The vegetation comprises short grass and trees including

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the gum arabic acacia which thrives on the sandy soil and yields valuable crops. There is good grazing and excellent crops are raised over large areas.

South of the desert and red sand belts the plains of dark soil extend from the southern part of the Red Sea Hills near Kassala westwards across the Sudan, through the Central Sudan to the southern part of Darfur. The dark soil extends south to about Latitude 6° N. near the Abyssinian border, and covers the northern parts of Mongalla and the Bahr el Ghazal provinces. The soil, often referred to as cotton soil or *badob* is typically clayey, and as a consequence cracks when it dries after the rains. There is very little drainage from its surface and such streams as cross it usually depend for their supplies on more favourable catchment areas. The surface is covered with grass or savanna forest. Considerable areas are cultivated and it affords wide areas of grazing.

The surface of the plain is broken occasionally by groups of hills which rise from it like islands in a sea. Granitic hills are fringed by aureoles of red sandy soil sloping gently up from the plain to the base of the rock inclining. This red soil has resulted from the gradual disintegration of the rock. Permanent water supplies, in the form of wells and also temporary supplies from storage tanks, are associated with these hill groups which, probably since man arrived on the scene, have played important parts in the human enjoyment of these regions. The well-drained sandy slopes overlooking the plains afford favourable sites for villages. Hills formed of rock that does not readily disintegrate stand up abruptly from the plain, but even these have played their parts as landmarks and in throwing off water to fill reservoirs.

In the Anglo-Egyptian Sudan the dark soil in the south merges into the red soil of the humid tropics. The

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transition is gradual and no precise limit can be drawn. The limits of climatic zones have varied and in the past humid tropical conditions have extended much farther north, with the result that lateritic ironstone has been formed where it is now desert, and there are still remnants as evidence of the change. The essential feature of the red soil region is that the soil is sedentary and has been formed from rocks underlying it. Except for alluvial deposits near streams, it has not been transported. South of the belt of dark clay soils lateritic ironstone begins to prevail below the surface. The soil is more sandy and does not crack. The ironstone, often in the form of a gravel of little nodules, is very useful in making roads and may be dug from shallow pits. In the Western Sudan, Nigeria, etc., there is no belt of dark soil and the red sand merges directly into the red soil of the tropics with its lateritic ironstone.

Grass and trees grow freely on the red soil and people cultivate ground according to their needs. They often prefer to move rather than continue cultivating the same ground.

Bordering the Sudan on the east are the Highlands of Abyssinia where other conditions prevail, consequently the types of country of the Sudan plains are practically limited by the boundary.

Rock Weathering

Rocks in the Anglo-Egyptian Sudan are exposed to atmospheric agents varying from those of the arid desert in the north to the humid tropics in the south, as well as to the humidity of the sea. Some interesting weathering is displayed. In the desert the principal agent is the wind and the sand it carries. The surface of the rock is planed or grooved according to its variations in resistance to abrasion by the wind-driven sand. The action

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of the wind-driven sand is limited to within a few feet of the surface of the plain. Within this belt the rock surfaces are cleaned while above it they preserve their surface discolouration. The action of the wind is often particularly well displayed where there is a pass between two hills. The surfaces of hard rocks eroded by the wind are usually remarkably polished. They may be smoothed so that they appear as if covered by a film of varnish. Rainstorms among desert hills certainly produce very considerable effects. The falls are rare but when they occur they may be torrential and the ground has no covering of vegetation to form any protection. The consequence is that these streams are very powerful and sweep all before them. The results of water action are often remarkably conspicuous in the desert. Care must be taken not to attribute to desert conditions many of the rock forms displayed there. The desert has not always been desert and wider study suggests that some of the hill forms have arisen under more humid conditions. In fact, apart from the action of the wind and streams, the desert is a region of great stability of form. The sugar loaf type of hill as typified by Jebel Kassala is the result of the slow processes of denudation acting on rocks of different hardness. Jebel Kassala stands nearly 3,000 ft. above the surrounding plain and this means that denudation has removed that amount more from the less resistant rocks around it. A sugar-loaf form with a fringe of boulders at the base seems to have arisen under fairly humid conditions, as in the southern parts of the Sudan to-day where, at Loka, Gumbiri, a hill of similar form can be seen clothed in vegetation with a good deal of soil among the boulders. The soil holds the moisture against the base of the hill and this decomposes and is eaten into faster than the freely exposed upper parts.

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When such a hill is exposed to drier conditions the vegetation disappears and the soil, no longer held by roots is washed away.

Granite hills in the Red Sea Hills usually show disintegration and pitting, such as is not seen on hills of similar rock farther inland even in the more humid regions of the south. In intermediate regions hills are to be seen displaying pitting on the eastern sides which are affected by winds from the sea, while the western sides are smooth. It suggests that this pitting is not due to the moisture alone but to some other agent, perhaps salt, brought by the wind from the coast. The salt crystallising breaks up and disintegrates the rock.

Apart from disintegration there is sometimes hardening of the surface or formation of concretions. The lateritic ironstone, so typical of tropical regions seems to be the result of the alternate dry and wet seasons. The rain water soaks in carrying with it traces of nitric and carbonic acids, thus silica, lime or iron may be dissolved. During the dry season the solution is drawn to the surface where it evaporates, and matter in solution is left behind in the form of crusts or concretions. The iron in the form of limonite often takes up spherical or circular forms as markings in the rock or nodules. The iron-cemented, or ferricrete, sandstone appears in odd shapes and has often been mistaken for lava. The surface of the ground at Omdurman is covered with a layer of iron concretions (limonite) and similar deposits are seen more frequently farther south. The silica appears as a chalcedonic cement forming a hard outer crust to rocks. Silcrete sandstone is useful for making millstones. Lime concretions appear in a variety of forms and usually, where there is lime, iron concretions are not formed. The lime concretions in clays are rounded, and irregular, almost like artichokes.

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In sand the lime forms root-like or branched concretions, and these are seen especially near rivers where the river seems to have supplied the lime solution. This soaks into the banks and evaporates from the surface of the land leaving the lime in the form of concretions. The root and branch forms may be due to the solution having actually followed the courses of plant roots but no organic structure is preserved in the concretions. The resemblance is real enough to have prompted drilling in search of coal where there was an abundance of these apparent fossil plants. The older alluvial deposits flanking the Nile usually contain considerable amounts of these concretions. The lime concretions render the clays quite useless for making bricks. Where the lime nodules are abundant they may be collected for burning. Though the lime is sandy and this must be discounted in adding sand to make mortar, it has afforded very useful supplies in many places where no other limestone is handy.

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The formations occurring in the Sudan, besides igneous rocks of various ages, comprise in ascending order:—

- (e) Recent Deposits.
- (d) Oligocene Fresh Water Deposits.
- (c) Abyssinian Plateau Basalts.
- (b) Nubian Sandstone.
- (a) Ancient Crystalline Rocks.

(a) The Ancient Crystalline Rocks appear in the form of gneisses and crystalline schists mainly of igneous origin, but including altered sediments and limestones or marbles. They prevail over very large areas of the Sudan and are similar to the gneisses and schists in other parts of the world as described in text books, consequently there is no need to enter here into details about them. In the

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Sudan we have not yet recognised any of the early palæozoic formations, so it cannot be definitely stated that these rocks are pre-Cambrian. We know from evidence in Egypt that the rocks are much older than the Carboniferous and the presumption is that they are pre-Cambrian.

(b) The term Nubian Sandstone Series has been applied to formations which, while resembling one another, have been found to be widely different in age. The series comprises white and buff-coloured soft sandstones interbedded with white or grey mudstones or rarely clay. The character of these beds shows that they were laid down in an ocean or large lake. The presence of gravel indicates that there were at times strong currents, so presumably the water was shallow. The rocks rarely contain conspicuous flakes of mica. The only fossils hitherto found are plant remains, usually in the form of a silicified wood but more rarely there are impressions of leaves and stems. The silicified wood is not of much assistance in determining the age of the formation but leaf impressions are most valuable. Those from the rock at J. Dirra in Darfur have proved to be of Lower Cretaceous age. The absence or rarity of either marine or fresh water fossils such as molluscs, crustacea, etc., is remarkable. None have yet been found in the Sudan, and their absence might suggest that conditions at the time of the deposition of the Nubian Sandstone were unfavourable to the existence of animal life. It may be that the shells and all traces of such fossils have been destroyed. Nubian Sandstone extends northwards into Egypt where some beds have been found to interdigitate with marine beds of Upper Cretaceous age. In Abyssinia typical Nubian Sandstone is older than the Jurassic Antalo Limestone which rests on it. The Nubian Sand-

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stone therefore presents an interesting problem of age, but further study will certainly lead to the recognition of the limits of its various parts.

The Nubian Sandstone is a valuable water-bearing formation. Wells dug in it almost all yield abundant supplies of good water. In some areas the presence of Nubian sandstone can be known from the existence of numerous villages. Outside these areas the villages are few and far between.

(c) The Abyssinian Plateau Basalts extend into the Sudan near Gedaref and Gallabat. The rocks are similar to such basalts elsewhere. Their age, like that of the Deccan basalts in India, thought to be contemporary, may be late Cretaceous or early Eocene. Wells in them yield valuable supplies of water.

(d) The Oligocene fresh-water deposits are represented by fossiliferous chert boulders and nodules occurring near Atbara. An interesting fauna of large freshwater molluscs has been found but we know almost nothing of the beds in which these nodules were contained or the limits of the waters that fostered the growth of the molluscs.

(e) The Recent deposits comprise :—

Soil.

Alluvium.

Blown Sand.

Wind Deposited Clay.

Recent Formations of the Red Sea coast.

The maritime plain north of Port Sudan is broken by small hills of limestone sometimes with gypsum. Notable among these is Saghum about 50 miles S. of Mohammed Gul and there others north of Ras Rawaya. Makawa Island is formed of the same kind of rock. Associated with the limestone are beds of gypsum and in places the limestone is impregnated and partly replaced by gypsum.

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The gypsitisation of some of the fossils is very remarkable and as a consequence they may be broken into smooth slabs or sections. Barytes has been found associated with the gypsum. In several places these beds are gently folded and this feature caused a search to be made in the locality for indications of the presence of mineral oil deposits. The examination showed that the folding is associated with intrusions of basalt and oil is most unlikely to be present. The limestones are full of fossils, practically all of which are of kinds that still live in the neighbouring sea. The age of these rocks is therefore to be regarded as Pleistocene and they are consequently much younger than the oil-bearing ones of the Egyptian part of the Red Sea Coast.

The maritime plain where these limestone hills occur is essentially formed of detritus from the hills. Good sections exist at the Yameina ravine N.W. of Mohammed Gul and the mass of rounded boulders is displayed. The boulders often do not appear on the surface as they break up, on exposure to the elements, into angular fragments. In front of large valleys in the hills and rising above the general level of the plain, are great masses of shingle which the streams have deposited in former times.

Along the shore is a continuous belt of raised coral reef usually attaining heights of 10 to 20 feet above the present sea and exceptionally up to about 40 ft. At J. Abu Shagarah on Ras Rawaya, the raised reef with corals still in positions as they grew, stands at nearly 100 ft. above sea level. The coral reefs form a fringe to the deposits of the Maritime Plain. These, in places near the coast, are impregnated with gypsum certainly formed as a result of sea water percolating through and evaporating from the surface of the land. The gypsum crystals are about the size of rice grains. The corrosion of the shells,

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characteristic of this region, is perhaps associated in some way with the process of gypsitisation. The shiny, nacreous layer of the fresh shells seems to be destroyed almost at once.

Deep inlets occasionally break the coast and provide many convenient harbours for small craft, one of which, at Port Sudan, has been developed with modern equipment to suit the needs of great steamships. These inlets are remarkable features of the coast. They often contain very deep water and almost invariably they are at the outlet of a stream draining from the hills. It has been suggested that these inlets are the results of catastrophic action involving breaking and the faulting down of parts of the reef. The possibility of such faulting may be supported by its association with movements which have raised the coral reefs and which are relatively modern. On the other hand, the association of these harbour inlets with streams is significant and perhaps there is no need to invoke fractures of the land at so many places along both sides of the Red Sea coast. It is more likely that the inlets were carved by streams at a period when the sea stood at a lower level.

A very large part of the Central Sudan, as already mentioned, is covered by deposits of either sand or clay, laid down by the wind and, though the sand region is distinct from the clay region, it is convenient to consider them together. The constituents of both have been brought by wind from the desert.

Granite, composed of quartz, felspar and mica, exposed in the desert gradually breaks up. The quartz is tough and forms sand grains which wear slowly but are not readily broken up. The felspar and mica both have the property of cleavage. They break easily in certain directions of the crystals. The consequence is that agents

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of denudation reduce them to dust. Perhaps the present desert under former humid conditions was covered with soil and other surface deposits, but these may be regarded as an intermediate stage in the breaking up of the constituents of the granite whence the material was originally derived. No fine material that is transportable by wind can remain unprotected in the desert. The wind sweeps it about and sooner or later it travels into the less arid regions around. Sand grains are rolled along the surface and some may be caught by the Nile and carried down by its current to the sea. Much of the sand, however, is held by vegetation near the desert border and thus the red sand deposits of Kordofan and Darfur have been formed. The sand is essentially quartz and thus accounts for only one constituent of the original granite.

The fine material is lifted high up into the air by the wind and once the small particles have been raised, other forces come into play and help to maintain them in the air. The sun's rays, striking these particles, heat them and they warm the air around and this expands and rises, carrying the particles upwards. During the nights the particles fall but they are small and many do not reach the ground but may be lifted again during the following day. Electric forces, the action of which is not fully understood, may also help to keep the fine mineral particles floating in the air. The particles are often charged electrically and similar charges repel one another. The dust haze due to fine dust in the atmosphere can be seen often with striking colours near the horizon when the sun is low, either at dawn or sunset. The fine mineral particles raised from the desert are carried very much farther than the sand grains which roll on the surface. The heavier part of this fine material falls directly, and much of the rest is brought down by rain when moisture

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condenses on the particles. In this way there have been formed the clays of the south central Sudan giving rise to the heavy clay soils. The clay is buff or brown colour and is remarkably homogeneous without any trace of bedding planes. It is often traversed by slanting joints. On the plains the clay is covered with soil derived from it but its true colour is only seen in cuttings or excavations which reach depths of two metres or more. The clay has no relation to the underlying formation and rests without distinction on crystalline rock, sandstone, basalt or alluvium. A feature of the clay is the presence of lime nodules. At first sight their presence may seem remarkable in a formation regarded as wind deposited but they have been formed in place in the manner already described. They are usually smaller near the surface and increase in size with the depth up to several inches across. In places on the Blue Nile, for instance, where the river has cut into the clay, accumulations of the nodules have been formed and these are useful sources of lime for local purposes.

It has often been suggested, usually by casual observers, that these clays are of alluvial origin. If they were alluvial, they would, when exposed in section show bedding but they are quite unbedded. Also if they were of alluvial or lacustrine origin their occurrence would bear relation to the levels of the country but these clays occur uniformly over areas with quite different levels, as for instance across the Gezira from the Blue Nile to the White. Over part of this area the clay rests on older deposits of alluvium but the two formations are distinct.

We have referred to the extensive deposits of blown sand, derived from the desert and occurring in the White Nile, Kordofan and Darfur provinces. Along the southern edge of the blown sand region in the White Nile and

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Kordofan Provinces there are dunes rising above the clay soil plains and the question arises as to the age relationships of the two formations. It seems from evidence at present available that the dunes are older and that the clay in these places has been deposited around the dunes. Farther west, in Western Kordofan and Southern Darfur, the passage seems to be more gradual and the two formations may have been practically contemporaneous.

Apart from these areas of blown sand, there are also local dunes. A notable one is the Goz Abu Delua, which is about half a mile wide and runs from N. to S. for many miles, passing about 40 miles W. of Omdurman. The sand is probably derived from the desert to the north. There is a small belt of dunes crossed by the railway at Ogrein between Atbara and the Red Sea. The sand may be from a local Wadi. There are dunes near the banks of both White and Blue Niles near Khartoum and these seem to be formed from sand blown out of the bed of the Blue Nile during the low-stage season. There are dunes at the edge of the delta at Tokar.

The most important alluvial deposits are those bordering the Nile and its various tributaries. The White Nile has a very low slope and a correspondingly gentle current so that its water deposits practically no silt. In the reach from Khartoum to Kosti, the water is actually ponded by the Blue Nile which may even enter and flow up it. The water lies in a channel with gently shelving sides quite unlike the ordinary river. The Blue Nile, the Atbara and the main Nile north of Khartoum are flanked by stretches of alluvium, as well as containing alluvial islands, all of which are most valuable agricultural land. The top surface of the outer edge of the modern alluvium stands at the level of very high floods and there is lower ground inland. There is usually a belt of older

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alluvium at a higher level farther inland. The modern alluvium is highly fertile and is intensively cultivated. The older alluvium, impregnated with lime and some salts, is less fertile and usually water has to be lifted on to it by mechanical means. The modern alluvium is distinguished as *Gezira* or *Garf* land in contrast to *keru*. The alluvial deltas of the Gash and the Baraka have already been mentioned.

Soils arise from the action of the climate on the geological formation. Latterly it seems to have been recognised that the same climate produces similar soils from quite diverse formations. In Kordofan, there are red sandy soils resulting from the deposits of desert sand. Over large extents of the Sudan there is *badob*, commonly referred to as cotton soil, which arises mainly from the wind-deposited clay. The soil is usually dark in colour, very clayey and sticky during the wet season and cracks deeply during the dry season. It is about two metres deep and beneath it generally occurs the normal, wind-deposited clay. Almost identical soil may be derived from alluvium and also from the weathering of basalt. In the south, there are reddish soils resulting from local rocks.

Igneous rocks, granites, syenites, rhyelites, basalts, etc., occur in considerable variety but do not differ materially from those of other parts of the world, as described in text books. Most of them are associated with the ancient crystalline rocks. Some have been involved in crustal movements and are foliated, others are younger than the movements. Some granites and rhyolites have been erupted in the great interval of time between the formation of the crystalline rocks and the deposition of the Nubian Sandstone. Among these are the rhyolites and felsites of the Shabaluka or 6th Cataract.

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Since the deposition of the Nubian Sandstone, the eruptions seem to have been principally basalt, including the plateau basalts of Abyssinia. In geologically recent times there have been volcanic outbursts in Abyssinia, the Bayuda Desert, near 'Uweinat, Maidob, Jebel Marra and also at other places. Hot springs are frequent in Abyssinia and occur at several places in the Sudan, notably Akasha, in Halfa Province; Umberembeita in Kordofan; and Sofiri in Mongalla Province.

Minerals

Gold occurs and is worked in the Red Sea Hills, also near the Abyssinian frontier south of Roseires. There are small quantities of the metal in the Nuba Mountains and in Mongalla Province but they are not payable. Copper has been worked in former days at Hofrat en Nahas in the Bahr el Ghazal, and lead at Kuttum in Darfur. No extensive mineralised areas have been recognised but the field is large and the searchers, hitherto, have been few. Moreover, as may be appreciated from other parts of this article, a very large proportion of the surface is formed of recent deposits and it is only when wells or other excavations penetrate to the hard rock below, that we find out what is hidden. The isolated hills that protrude above the level of the plain and are such conspicuous features, certainly owe their prominence to their being different to the rock beneath the plains around.

Water is the most important mineral and endeavours to discover new wells and to improve existing supplies have been the first care of the Geological Survey. A pamphlet on the subject has been issued and attention is directed to it for information. Suffice it that water supply is the cardinal factor in any development of the natural resources of the Anglo-Egyptian Sudan.

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References

Very little has yet been written about the geology of the Sudan. In this article, attention has been directed principally to features which are particularly displayed in the country and, for this reason, more space has been devoted to the surface deposits. The ordinary characters of rocks may be found described in text books such as those by Watts or by Rastall and Lake. To those pursuing the subject more closely, attention is directed to :—

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THE NILE WATERS

By R. M. MACGREGOR, C.M.G.

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NO account of the Sudan would be complete without some description of the great river which traverses the country from south to north, and with its tributaries plays an important part in the life of many of the people.

With the possible exception of the Amazon, the Nile is the longest river in the world ; though it is exceeded in volume by many. Its length from its source near Lake Tanganyika to the sea is about 6,500 kilometres, or over 4,000 miles. The riparian states are Tanganyika, Kenya, the Belgian Congo, Abyssinia, Eritrea, the Sudan and Egypt. It is in Egypt that the Nile is of outstanding importance as owing to the lack of rainfall no crops can be grown without artificial irrigation. The unique extent to which the prosperity of Egypt was dependent upon the Nile excited the wonder of Greek and Roman travellers ; and the statement of Herodotus that " the Nile is Egypt and Egypt is the Nile " is often quoted to-day.

Large tracts of the Sudan possess an ample and secure rainfall, and in other areas the rainfall, though fitful in its incidence, provides well enough for the needs of a scanty and mobile population, whose natural bent is pastoral rather than agricultural. Nevertheless for many of the inhabitants of the Sudan the Nile is one of the central features of existence, either as a source of irrigation

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or of drinking water for the people and their herds. It holds many varieties of fish, and, particularly in the South, these are an important element in the food of the people. It is the central highway of the country; though its importance from this point of view has diminished with the development of railway and motor transport. The service of navigation provides a means of livelihood for many of the riparian population. It is safe to say that the Sudan ranks next to Egypt in utilisation of, and dependence upon, the waters of the Nile.

From 1894 onwards the British Government have obtained from the Italian Government, on behalf of Eritrea, and from the Abyssinian Government, various assurances relating to the Setit, the Atbara, and the Blue Nile, whereby the interests of Egypt and the Sudan in the headwaters of the Nile are protected. In particular the Emperor Menelik of Abyssinia in 1902 undertook not to allow any works to be constructed at Lake Tsana save in agreement with the British Government and the Government of the Sudan. These assurances have enabled Egypt to extend her irrigation system without fear of interruption of supply; and make it possible for both Egypt and the Sudan to look forward to the utilisation some day of Lake Tsana as a storage reservoir for the benefit of both countries.

Irrigation from the Nile can never attain the importance in the Sudan that it possesses in Egypt. Apart from the consideration already mentioned, namely the relatively high rainfall over a large part of the country, there is the topographical fact that the area accessible to canals is relatively small. No part of the country can be commanded by canals fed from the White Nile. The river below the junction of the White and Blue Niles flows in a narrow valley containing inconsiderable areas of

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culturable soil ; and these are inaccessible to any gravity-fed canal system. The only important irrigable area in the Sudan is the northern part of the Gezira, the tract lying between the White and Blue Niles, where the levels are such that the land can be watered from the Blue Nile. Its culturable area is estimated to be just over two million feddans.

From the early days of the re-occupation of the Sudan the engineers of the Egyptian Ministry of Public Works applied themselves to a study of this area as a potential field for irrigation. As a result the Gezira Irrigation Scheme came into being. Before describing this scheme, and explaining the arrangements entered into with Egypt in regard to its operation, an outline must be given of the hydrology of the Nile from the point of view of irrigation.

One of the salient features of the Nile is the annual flood, the rise and fall of which take place with a degree of regularity in striking contrast with the behaviour of rivers subject to the climatic vagaries of Europe. Broadly speaking it may be said that from early February to the end of July the natural flow of the river falls short of requirements for irrigation. There is at that season no surplus water to flow into the sea, and the two mouths of the Nile have to be closed by earth banks to prevent the influx of sea water. The rise of the flood begins in June ; but it is the end of July or early August before supply overtakes demand in Egypt. The banks are then cut through by hand and rapidly demolished by the rising flood. From this time onwards until October or November a large volume flows freely into the sea. The last phase of the flood is a steady diminution of the flow, until the falling supply meets the rising demand and the river mouths are closed off again.

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It is clear that in these conditions one of the aims of engineering policy must be to store some of the flood waters now escaping to the sea for use during the season of shortage. Otherwise no expansion of irrigation would be possible. The matter, however, is not so simple as it might appear. Sites are not common where the conditions are suitable for storage on the scale necessary for the irrigation of large tracts of land. Moreover the water impounded must be as far as possible free of silt; otherwise the reservoir would be slowly put out of action by accumulated solids. This point has an important bearing on the problem of storage, and the silt content of the water as well as the volume available must be taken into account in any storage project. From this point of view there is a marked difference between the water derived from different parts of the Nile basin.

The two main affluents of the Nile are the White Nile and the Blue Nile, which unite at Khartoum, whence the combined waters follow a northerly course of some 1,900 miles to the Mediterranean. Throughout this length the Nile is joined by only one tributary, the Atbara. Though an important tributary of the Nile, the Atbara is not a perennial stream. Its waters are derived chiefly from rainfall in Abyssinia, and to a lesser extent in Eritrea and the Eastern Sudan. It is in flow for a few months only each year, usually from June to November; and for the rest of the year it consists of nothing but a series of isolated pools.

The catchment areas of the White and Blue Niles differ widely in their physical characteristics, and consequently there are important differences in the nature of the flow of the two rivers. The flow of the White Nile, derived from rain falling on the tropical forests, extensive swamps, and the Great Lakes of Central Africa, has a compara-

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tively small variation between low water and high flood, or, in more technical language, between minimum and maximum discharge. For the same reason the water of this river is free from silt at all seasons. The Blue Nile, on the other hand, rises in the highlands of Abyssinia, where the rainy season is shorter, the vegetation consequently less dense, and there are no swamps. The only natural reservoir, Lake Tsana, is not comparable in area with the Lakes Victoria and Albert, and, being situated very high up in the course of the river, its effect in moderating the run-off is relatively slight. The combined effect of these physical factors is to produce in the Blue Nile a short but intense flood heavily charged with silt, followed by a period when the flow of the river falls very low. Stated in figures, the White Nile possesses a maximum discharge of from five to six times the minimum; whilst for the Blue Nile the ratio is as much as four hundred to one. The flow of the Nile is derived chiefly from the Blue Nile during the flood season, and from the White Nile during the low-water season.

Another important difference between these two rivers is that the peaks of their floods do not coincide, that of the White Nile being the later of the two. This is accounted for by the greater length and flatter gradients of this river's course, and the retarding effect of intervening swamps. The flow of the White Nile is also retarded by the rapid rise of the Blue Nile flood at Khartoum. In fact for some weeks the White Nile is entirely dammed back, and its flow at times even reversed, as in a tidal estuary. This retardation of the White Nile is for Egypt a fortunate provision of nature, since it makes it possible for the silt-laden flood from the Blue Nile and the Atbara to be escaped to the sea, leaving the clear water of the later White Nile flood available for storage.

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In the closing years of the last century it became clear that cultivation in Egypt could not be further expanded without the provision of storage water. The First Cataract presented a particularly good site for a dam, and here the Aswan Dam was built and came into operation in 1904. It was not long before the new storage water was entirely absorbed by expansion of the demand for irrigation. A second instalment of storage water was provided by raising the Aswan Dam, an operation which was completed in 1912. A third instalment was provided in 1934 by a further raising of the dam. Expert opinion has pronounced any further heightening of the structure to be impossible.

The principle observed in filling the Aswan Reservoir has already been mentioned, namely to let the silt-laden flood waters pass unchecked, and to impound only the later and clearer waters of the falling river. The greatly enlarged volume of the reservoir, resulting from the raising of the dam, will necessitate the impounding of a proportion of silt-laden water; but the expert authorities concerned do not fear any detrimental effects.

It has been explained that the Blue Nile flood itself impounds the waters of the White Nile. This fact suggested to the engineers the construction of a dam which would bring this natural effect under control, and enable the impounded water to be held for release when needed, instead of being released automatically by the fall of the Blue Nile. Possible sites were examined, and designs were studied. Eventually Gebel Aulia was selected as the most promising site; and some work was actually carried out during the years 1917 to 1920. In the latter year this project became the subject of acute political controversy in Egypt, and work was closed down in 1921. As an alternative measure the second raising of the Aswan

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Dam was undertaken. The suitability of Gebel Aulia from an engineering point of view was still recognised ; and in 1933 the Egyptian Government finally placed a contract for the Dam, and work is now (1934) in active progress.

This brief account of some of the main features of the Nile, both natural and artificial, will help to explain how developments in the Sudan have been harmonised with the interests of established irrigation in Egypt.

The engineering studies of the Gezira coincided in time with the first raising of the Aswan Dam, and with the planning of the Gebel Aulia Dam on the White Nile. No formal agreement was in force at that time as to the conditions under which the Sudan should take water for irrigation purposes from the Nile. But it was taken for granted that abstractions of water by the Sudan should not diminish the volumes already in beneficial use in Egypt. In other words, the Sudan should only take water at the season when surplus was flowing to the sea. It was at first thought that irrigated crops in the Gezira could be grown under this limitation, and that therefore a diversion barrage, without any provision for storage, would serve at the intake of the proposed canal. This view had, however, to be revised for two reasons, namely the introduction of long staple cotton in the Sudan and the occurrence of a very low river in 1913-14. The former lengthened the season for irrigation ; whilst the latter shortened the period during which water could be regarded as surplus. Records of the maximum height of the Nile flood in Egypt are available for periods totaling some 960 years, and that of 1913-14 was one of the four lowest on record. Notwithstanding this very abnormal character of the year 1913-14 it was decided to change the basis of design, and to build a storage dam instead of the diversion

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barrage originally planned. The final plans provided for the canalisation of an area of 300,000 feddans with a dam designed to serve the dual purpose of raising the water levels to a height which would command the canal intake, and of impounding above that level the storage volume to cover requirements after cessation of surplus water. Execution of the project was put in hand just before the War, but progress had to be suspended. The works were eventually completed and brought into operation in July, 1925.

The cost had greatly exceeded the original estimates. On the other hand it was found that the water available could be made to serve a larger area than the 300,000 feddans of the completed project. Several different factors were involved here. In the first place the actual allowance of water per feddan of crop could be reduced without ill effect below the figure adopted in the calculations on which the project was based. In the second place the operation of the scheme showed that there was practically no percolation loss from the channels. In irrigation practice elsewhere there is a very considerable loss from this cause, and appropriate allowance for it had been made in the calculations. Consequently a saving of water was at once manifest. The fine wind-deposited loess of the Gezira, however unsatisfactory to the farmer and to the builder of houses or engineering structures, was found to possess at least one virtue: it formed an almost impervious medium in which to carry water. In the third place by shutting down irrigation at a date earlier than that assumed in the calculations, water could be made available for extension of the area. The combined effect of these three factors was such that the area could be increased by about fifty per cent without exceeding the volumes of water provided in the project.

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Another and greater possibility of extending the area, thereby increasing the earning capacity of the dam, without infringing the principle of using only surplus water, was latent in the method by which it was proposed to operate the dam. As already explained, the dam was designed to hold the calculated requirements of storage water above the level necessary to command the canal. These calculated requirements included water to carry the crops to maturity, to keep the canal system in flow for domestic purposes from the end of one cropping season in April to the beginning of the next season in July, and to meet the evaporation losses from the reservoir. These arrangements involved keeping the reservoir partially filled at all times, with the result that a considerable fraction of its capacity would be unserviceable; whilst a further fraction would be lost by evaporation even during the months when irrigation was closed down. If the reservoir was completely emptied each year, these lost fractions would be available for extending irrigation. This change in the mode of operation would almost double the effective capacity of the reservoir, already increased by about fifty per cent by the factors first enumerated. Thus it was possible to reckon that the reservoir, originally designed to serve 300,000 feddans, might in fact be made to serve nearly three times this area, without abstracting from the river any but surplus water.

The basic features of the project had been decided in agreement with the Egyptian Government, to whom a pledge had been given that the area of 300,000 feddans would not be exceeded save with their agreement. Consequently the effective utilisation of the reservoir by extension of the area called for negotiations with Egypt. These eventuated in what is known as the Nile Waters Agreement signed on 7th May, 1929. Simultaneously a

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more detailed technical agreement, embodied in a separate document known as the Working Arrangements, came formally into operation. The effect of the settlement was to ensure that only surplus water would be used whether for direct flow into the canal, or for filling the reservoir. The volumes to be so used were limited, but there was no limitation of the area irrigable by means of these volumes.

The water requirements of the Sudan are so small in comparison with the normal flow of the river that ordinarily there is no risk of Egyptian interests being adversely affected. To safeguard Egyptian interests in the event of an abnormal year of late arrival of the flood, or of low discharge in the winter season, certain statistical criteria are applicable in a manner specified in the agreement. In the former event the opening of the Gezira Canal would be retarded, and in the latter event the date from which storage water must be drawn upon would be advanced. As explained in an earlier part of this chapter the irrigation year is divisible into a season of surplus and a season of shortage. The two criteria just mentioned represent the precise demarcation of the two seasons as at the Sennar Dam.

Although these arrangements only came formally into force in May, 1929, their provisions, so far as these safeguarded Egyptian interests, had actually been in practice since the Gezira Scheme came into operation. The change in mode of operating the reservoir resulted in the discharge of substantial volumes of water which were surplus to the Sudan's requirements, and which Egypt was able to utilise. This surplus naturally decreased with the expansion of area in the Gezira; but during the first six years of working the total volume released to the advantage of Egypt equalled that used by the Sudan.

The agreement, besides regulating the use of water from

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the Sennar Dam for the irrigation of the Gezira, covers also the use of pumps for lift irrigation throughout the Sudan, a number of which are operated by Government and by private enterprise. The right to water a certain area, varying with the season of the year, had been granted by the Egyptian irrigation authorities in the years following the reoccupation. The agreement of 1929 provides that for any excess over these areas, occurring during the season of shortage, compensation water shall be given from the Sennar Reservoir on a specified scale. This provision places lift irrigation by pumps on the same footing as the major irrigation development in the Gezira. During the season of shortage the total abstraction of water for both purposes, with the addition of all reservoir losses, must not exceed the volume which has been stored in the reservoir during the preceding flood season. Control of these arrangements is maintained through what is known as the water consumption account. This shows the volume of water at the Sudan's credit at the beginning of each season, with a running account of all subsequent debits for losses in the reservoir, water drawn off into the canal, and the compensation water for pumps. So long as the closing balance is in the Sudan's favour the provisions of the agreement have been observed. At the present stage of development this condition is fulfilled with a substantial margin.

Further development of irrigation in the Sudan, on a scale greater than can be met from this margin, would call for the provision of additional storage. For this purpose Lake Tsana would serve as a reservoir if the necessary permission can be obtained from the Ethiopian Government.

Egypt has important irrigation interests in the upper waters of the Nile, in connection with which the Ministry

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of Public Works maintains an engineering organization in the Sudan. Since the studies for the Gebel Aulia Dam culminated in a final design the engineers have concentrated on a project comprising a dam at Lake Albert and a canal to divert a large part of the low season flow from what is known as the Sudd region of the White Nile. These two works form integral components of a single conservation project, since neither would yield anything approaching its full value without the other. The works would be on a large scale, needing perhaps ten or twelve years to complete. The hydraulic factors are somewhat intricate, and the Sudd region is an unfavourable terrain for engineering surveys. It may therefore be several years before the various alternative alignments for the canal have been fully examined, and the project takes its final shape.

The Egyptian authorities also maintain an elaborate system of hydrological study, involving recording of gauges and measurement of discharges at many points on the course of the Nile and its tributaries. These provide the data not only for new projects, but also for the annual filling and emptying programmes of the complete reservoirs, and for the general conduct of irrigation operations in Egypt.

ECONOMICS AND TRADE

By R. DAVIES

Sudan Political Service

THE economic possibilities of the Sudan are determined, of course, mainly by the physical characteristics of the country and by its geographical situation.

From the economic point of view, the most convenient description divides the Sudan into three zones, each extending from the eastern to the western frontier. Of these, the most northerly, which lies, approximately, between the 22nd and the 15th parallels of latitude, is a desert or semi-desert region with a very small and precarious rainfall or none at all: the middle belt, which extends roughly from the 15th to the 10th parallel, receives rain adequate in quantity and sufficiently well-distributed to permit of the regular growing of crops by its aid: while the southern zone, from the 10th to the 4th parallel, has a rainy season of about eight months' duration and produces the forests of large trees to be expected in a wet tropical climate.

Across these zones flows the Nile. In the southernmost, the White Nile and its tributaries, of which several are seasonably navigable by steamers, drain every part of the area: in the middle region, the Blue Nile, with its two main affluents, comes in from Abyssinia, to join the White Nile as it enters the northern zone: thereafter, the Nile receives no further increment of water, except from the Atbara, in its course to the sea.

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The Sudan is bounded on the north by Egypt ; on the east by the Red Sea, the Italian Colony of Eritrea and Abyssinia ; on the south by Kenya, Uganda and the Belgian Congo ; and on the west by French Equatorial Africa. Of the countries named, all but Egypt are exclusively producers of raw products of much the same kinds as those produced in the Sudan, so that there is little possibility of trade with them, though the import of Abyssinian coffee is an exception of some note to this statement. There are, moreover, no feasible trade routes across the eastern, southern and western frontiers, to remoter markets. In the matter of external trade, therefore, the orientation of the Sudan is towards Egypt and the Red Sea.

To this trade the northern desert zone opposes a formidable barrier. At first sight it might appear that the Nile, traversing the country from south to north, would provide an easy means of transport in the desired direction, but, as though deliberately designed for the isolation of the Sudan, no less than six cataracts obstruct the course of the river between Khartoum and Aswan and render it almost useless as a carrier of any considerable trade. Nor must it be supposed that by the construction of railways, to Halfa and Port Sudan, this barrier has been removed. It remains in the form of transport costs for the long haul across the desert, which handicap the development for export of the products of the fertile southern zones of the country.

In the days before the railways were made, the Nile was not, however, the only means of crossing the desert. Caravan routes existed, practicable for camels. Of these the most noteworthy were those from Berber to Suakin, then the main port on the Red Sea, and from Darfur to Assiut in Egypt (the *Arba'in*—or forty-day — Road),

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while routes existed from the eastern Sudan to several markets on the Nile in Egypt. It was also feasible to follow the river; but it would seem that this road, besides being less direct, was unpopular owing to the predatory characteristics of the riverain population. These old routes are even now of rather more than historical interest. Some of them are used by a considerable export trade in camels to Egypt, while the re-opening of the Berber-Suakin road, for the transport by camel of high-priced goods, in competition with the railways, is a possibility which has had to be taken into account.

It remains true, nevertheless, that the external trade of the country is for the most part carried by the railway to Port Sudan. Even when Egypt is their destination, it is cheaper to send goods by way of Suez than by Wadi Halfa, except to Upper Egypt. The export of cattle to Cairo by the Nile route is, for veterinary reasons, an exception to normal economic procedure.

Turning from the general situation of the Sudan to a review of its products, it is of interest to note that, while the internal state of affairs, in the matter of food-crops and the breeding of animals, probably remains now much the same as it has been for some thousands of years, the economic interest of the country for the outside world has, in the course of centuries, undergone a complete change.

In the remote past, the ancient Egyptians came to the Sudan for gold; and it was primarily to facilitate the getting of the metal that they undertook the conquest of the northern part of the country. Ivory and slaves were also important exports to Egypt which resulted from trade or war, while timber from the Gezira was taken for boat-building and other purposes. Gold, ivory and slaves remained until modern days the chief attractions

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of the Sudan for traders and raiders—types not always readily distinguishable.

At the present time, on the contrary, the vegetable kingdom and, to a lesser extent, the non-human but domesticated part of the animal kingdom, supply all but a very small proportion of our exported products, and the mineral resources of the country, so far as they are known, require but a brief description.

Gold is still mined in the range of mountains which lies parallel and near to the Red Sea coast. These mines are extensions, by the aid of modern methods, of ancient Egyptian workings. The largest of them has produced some £E.300,000 worth of gold between 1913 and 1934. The geological formation of the region is such that the gold-bearing reefs are very much broken up and distorted, with the result that, while they may yield a profit to comparatively small enterprises, they offer no prospect of development on a very large scale. Other gold mines in the hills of the Nubian desert, though worked in the present century, have been abandoned as no longer profitable. The natives obtain gold, also, by washing, in the southern part of the Fung Province.

Copper ore occurs in considerable quantity near the boundary between Darfur and the Bahr el Ghazal provinces and could probably be worked if the railway served this region; but these deposits could not, by themselves, bear the cost of making a railway; and there is not sufficient produce of commercial value in the country through which the line would pass, to justify its construction on general grounds.

Iron is found in various parts of the Sudan and has always been worked by the natives, but so low-priced a metal, in the absence of coal, is not of economic value.

Salt is produced by evaporation at Port Sudan, on a

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scale not only sufficient to meet the requirements of the Sudan, Western Abyssinia and the Eastern Congo, but to allow of a considerable export when the level of prices is high enough to cover costs.

The mineral possibilities of the country have for many years been studied by the Geological Survey, while private enterprise has examined numerous particular regions, notably the southern provinces, but apart from a recent discovery of magnesite rock in the south of Kassala Province, nothing of practical importance has been brought to light and it must be regarded as improbable that the Sudan contains any considerable underground sources of wealth. In particular, it is certain that the country contains no coal, while the oil-bearing strata at the northern end of the Red Sea do not extend south of the Egyptian border.

Next in ascending order of importance are the animal resources of the Sudan.

The semi-desert regions in the north, though their rainfall is insufficient for the general and regular growing of crops, are by no means completely desiccated, but produce grass wherever rain happens to fall, even on land which has not previously been watered for some years. Moreover, the beds of water-courses which, though dry during most of the year, carry occasional spates in the rainy season, provide water from wells during the dry weather and carry a fringe of trees along their banks. These conditions suffice for the subsistence of nomad arabs, who breed, for the most part, camels and sheep, following the grass into the desert during the rains and falling back upon their wells in summer.

In the central zone, though the sedentary population in the north of it own very considerable numbers of sheep, goats, donkeys and baggage camels, it is mainly the

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Baggara Arabs, spread out from the White Nile across the southern areas of Kordofan and Darfur, breeders of cattle and, to a less extent, of horses, who produce animals on a scale of economic importance. They, too, are nomads but, occupying as they do a region of regular and plentiful rainfall, resulting in abundant grazing, their movement is limited to a well-defined ebb and flow between their dry-weather and wet-weather headquarters.

The presence of tse-tse fly precludes the possession of animals in many parts of the southern zone, but vast numbers of cattle are owned by the tribes in the northern Bahr el Ghazal and in the Upper Nile provinces. The economic value of these herds to the country is, however, largely destroyed by the fact that the tribes owning them regard them as the only desirable form of wealth and therefore will not sell them.

The wild fauna of the Sudan no longer contribute anything of great importance to its economic life.

Ivory, in small quantities, is obtained from the herds of elephant which are still numerous in the southern provinces; giraffe are hunted by the Baggara Arabs and others; and the meat of both animals is of local value. Ostriches, mainly in the west, provide small quantities of feathers, of indifferent quality, but the birds are not farmed. Reptile skins, especially python skins, are an object of trade. In the interests of game preservation, however, most of the minor animal products have been declared contraband.

The vegetable resources of the country consist of rain-grown crops, irrigated crops and forest produce, of which the first and last may be treated together.

Relating these to the three zones, it is obvious, in the first place, that the most northerly can offer little prospect of rain-cultivation. Its chief wild products are vegetable

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ivory (the fruit of the Dom palm—*Hyphaene thebaica*), which is found on the east of the Nile, where it is a valuable cash crop to the nomad tribes, and senna mecca, which is collected on a considerable scale when export prices are favourable.

The central zone produces the bulk of the grain supplies of the country, both for local consumption and for export. The principal crop is dura (*Sorghum vulgare*), of which the area under rain-cultivation is estimated to amount to about half the total area cultivated, by all methods, in the Sudan. The other important grain crop is dukhn (*Pennisetum typhoideum*), which is grown on an area varying from a fifth to a third of that devoted to dura.

Rain-grown cotton is produced in the Nuba Mountains region of Kordofan province, on a scale which is already considerable and promises to grow still further. Oil-seed rain-crops grown in the central zone are sesame (*Sesamum indicum*), which occupies from six per cent to eight per cent of the total cultivated area of the country, and, on a much smaller scale, earth-nuts (*Arachia hypogaea*). Other crops include coarse tobacco, grown chiefly in Darfur and the Fung provinces for consumption within the country, chillies and beans.

From the point of view of external trade, however, the most important product of the central zone—apart from the irrigated cotton presently to be mentioned—is gum arabic, which exudes from wounds in the branches of the hashab tree (*Acacia verek*), made by removing strips of bark with a small axe. This tree occurs in a belt of country extending westwards from the White Nile as far as Northern Nigeria, and also in Senegal, but the Sudan supplies about four-fifths of the world's demand.

In the southern zone, apart from food-crops locally

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consumed, cotton is grown on a small scale, which is susceptible of great extension, and coffee has been successfully established. There is also an expanding cultivation of chillies. The forests supply mahogany and other valuable timbers which are at present exploited by Government enterprise only. Other minor products, such as bees-wax, hold potentialities for trade.

The various methods of irrigation of crops, practised in the Sudan, include free-flow irrigation from the Sennar Dam, in the Gezira, flood-watering in the deltas of the Gash and Baraka rivers of Kassala province and in certain basins near the Nile in the northern zone, and also pumps, water-wheels and buckets, which are used, also chiefly in the north, to lift water from the river for cultivation purposes.

Of these, the three first mentioned are dealt with at length in the article on the Nile Waters. It suffices here to repeat that, in the Gezira scheme, Egyptian Sakel-larides cotton is grown annually on some 175,000 feddans, giving a yield which varies roughly from two to four and a half kantars to the feddan, while a grain-crop is also grown to supply the needs of the tenants and others connected with the scheme. Beans are planted as a forage crop, on a scale which is restricted by the danger of pests. The deltas of the Gash and the Baraka produce the finest qualities of Egyptian cotton in the world, on areas which naturally vary with the floods received but may be expected to average about 40,000 and 36,000 feddans respectively.

Of the pump-schemes in private ownership, the most important is at Zeidab, in Berber province, devoted to the growing of American cotton. Of the remainder, a scheme for growing Sakel cotton in the White Nile province is the most flourishing. Others, in the neighbourhood of

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Khartoum, were initiated when very high prices ruled for cotton and are maintained with difficulty under less favourable conditions. The Governmental pump-schemes, of which there are four in Dongola, four in Berber and one in the White Nile province were, with the exception of the last, established primarily as "strong points" of defence against the famines which are apt to recur periodically in the northern Sudan. The tenants on these schemes grow American cotton for export as a cash crop, wheat, dura, barley and maize for food, and also fodder crops.

The other—and minor—methods of irrigation mentioned, though of great importance to the internal economy of the Sudan are, from a wider point of view, almost negligible. In the dryer parts of the northern zone date palms are planted in large numbers on the river bank. Their fruit is spoiled by rain, but when otherwise watered they yield a crop which is not only consumed in the country but finds an export market in Egypt. North of Khartoum, wheat, maize, barley and pulse crops are grown; onions are cultivated on some scale further south; while other vegetables of native consumption, dura and fodder crops, come into the customary rotation everywhere.

Before dealing further with the trade of the Sudan, some description must be given of the transport facilities available to move the products of the country and of the fiscal conditions under which commerce is carried on.

Railhead is El Obeid, in Kordofan, to which point camels bring a large proportion of the gum exported and of the rain-grown cotton from the Nuba Mountains, and also minor products, such as melon-seed. Bulls for entrainment to the Egyptian market come to El Obeid on the hoof from the Baggara tribes of Southern Kordofan and Southern Darfur and even, when prices are favourable, from the French Chad Colony.

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The first stretch of the line carries it across the White Nile at Kosti to Sennar on the Blue Nile, serving the gum region of eastern Kordofan and the cattle-trade of the White Nile Baggara.

At Sennar the railway bifurcates, the main line following the Blue Nile to Khartoum and on to Atbara, where it forks again to Wadi Halfa and Port Sudan, while the branch makes a circuit through Kassala province and joins the Port Sudan line at Haiya. The main line carries the Gezira crops of cotton, cotton-seed and grain, and coffee from Western Abyssinia, while the branch takes the gum, oil-seeds and grain from the Gedaref region, the cotton-crop of the Gash delta, and much of the donut trade.

From Atbara to Port Sudan, the railway is merely overcoming the obstacle of the desert already described. This portion of the line, taken by itself, is entirely uneconomic and, but for a local traffic between Atbara and Abu Hamed, the same condemnation applies to the haul from Atbara to Wadi Halfa. The small branch-line from Abu Hamed to Kareima is of trifling economic value.

At Wadi Halfa the railway ends and a steamer service makes connection with the Egyptian State Railways at Shellal. Goods carried to Egypt by this route are therefore subject to two handlings, corresponding to those at Port Sudan and Suez undergone by exports taking the way of the Red Sea, but, if Cairo is the destination, the latter route is the more economical. Cattle, however, generally follow the Nile, since the Egyptian Government, fearing the introduction of animal diseases into the Delta, object to the passage of Sudan animals through Lower Egypt. Dates from Halfa and Dongola provinces are carried largely by boat to Wadi Halfa and therefore also take the northern route.

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In extension of the railway in the opposite direction, steamer services on the White Nile connect Juba, in the far south, with Khartoum, all the year round, while steamers plying seasonally on the Blue Nile, the Sobat and Jur rivers serve respectively the Fung province, the Upper Nile province and Gambia in Western Abyssinia, and the central region of the Bahr el Ghazal province. The Gambia service brings down the bulk of the coffee imported from Abyssinia and takes up the salt, of Sudan origin, and the foreign goods in transit which, together, balance the coffee import. The Jur steamers carry the timber sawn at the Government mill near Wau, which has supplied large quantities of mahogany sleepers for the railways. Hides and skins and rain-grown cotton come by river from the south to Khartoum.

The road system of the Sudan reflects the varied, and often extremely difficult, conditions of terrain which the country presents.

Excepting the Upper Nile province, in which swamps and the lack of road metal make it practically impossible to do more than maintain dry weather roads by the repeated use of graders, the greater part of the remainder of the southern zone lends itself to road-making more easily than any other part of the country and, in fact, contains the best roads. Of these, the most noteworthy are the all-weather roads from Juba to Torit and to Nimule on the Uganda border and from Juba to Aba in the Belgian Congo, but there is also a network of all-season roads, both in Mongalla and in the Bahr el Ghazal provinces. These all carry motor transport.

The central zone contains no all-weather roads except in towns, but cleared tracks, graded where necessary, suffice for vehicles in the dry season. The western provinces, Kordofan and Darfur, are handicapped by soft

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sand dunes, which defy any economic method of road construction. Nevertheless, motor transport is used, and an answer to the difficulties is being found in engines of high horse-power and big low-pressure tyres. Camels, donkeys and even bulls, according to locality, are, however, still the main carriers by road in this zone.

Except in the neighbourhood of the river, there are no cleared roads in the northern desert belt of the Sudan.

There has naturally been a tendency for motor transport to compete with the railways for the carriage of passengers and high-priced commodities, on which comparatively high railway freights are charged so as to offset the very low rates which are all that the low-priced products of the country can bear, if they are to be exported across the northern desert barrier. Measures have, however, been taken to check this competition and so to force motor transport to fulfil its proper function of providing services which will be feeders of, or otherwise ancillary to, those of the railway system.

It will be apparent, from the preceding account of the prevailing conditions, that the expense of transport, whether due to the great distances to be covered, to difficulties of terrain, or to the necessity of repeated handlings of goods, is often a serious obstacle to their economic movement. This accounts for the phenomenon, which at first sight is puzzling, that prices of the same kind of produce often vary enormously in amount between different parts of the country. Most of Darfur, for example, is, economically, hardly part of the Sudan at all, except in respect of animals, which transport themselves, on the hoof or pad, at small cost to the exporter. An abundance of grain in Darfur would do little or nothing to relieve a famine in the central Sudan. It would normally be cheaper (unless there were a world shortage) to

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import grain—as has been done in the past—from the Persian Gulf, or even from India, than to move it from the west.

Fiscally, the Sudan is closely linked with Egypt. The products of either country pass to the other without payment of customs dues. The monetary system of the Sudan is the same as that of Egypt. Under the Condominium Agreement, all countries except Egypt enjoy equal facilities of trade with the Sudan.

By the provisions of this same Agreement, the Sudan is not permitted to levy a higher import duty on any commodity than that levied by Egypt. In practice, this restriction is of no great importance. Egypt has adopted a tariff of specific quantitative duties, many of them very high, while the Sudan still adheres to the simpler *ad valorem* system, levying ten per cent on imports in general and only eight per cent or less on those of special importance to the natives of the country or to its agricultural development. Specific quantitative duties, in exception to this statement, are levied on certain commodities, for example tobacco and alcoholic beverages. There is an export duty of one per cent *ad valorem* on all goods sent out of the Sudan. There are special regulations for goods in transit or for re-export.

The important result of the arrangements described is that certain products of the Sudan, which are consumed in Egypt but are not produced in that country in sufficient quantities to supply the local demand, enjoy a fiscal preference, sometimes a very large one, in competing for the Egyptian market with similar commodities of other origin.

In its commerce with Great Britain, the Sudan does not receive imperial preference but, since its main exports to the United Kingdom, for example cotton, cotton-seed and

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gum arabic, are on the free list, the absence of preferential treatment does not very seriously affect the export trade.

In these circumstances, the external trade of the country falls naturally into two categories—that with Egypt and that with the rest of the world.

Under the protection afforded by the Egyptian Customs tariff, cattle and camels—both for meat—sesame, grain, ground-nuts, melon-seeds, beans, peas and chillies are exported to Egypt to make good the deficiencies of the local supply of these commodities. From Egypt the Sudan receives the dyed blue cloth which is a staple article of native wear, cigarettes, soap, and a large proportion of its requirements of sugar. The balance of trade between the two countries is largely in favour of Egypt.

In its commerce with the rest of the world, the Sudan sends its cotton and cotton-seed mainly to the United Kingdom, though a proportion of the former goes to India; gum arabic is sent principally to Great Britain, France, Belgium, Italy and America; hides and skins to the United States, Greece and Italy; oil-cake to Great Britain and Holland; dom-nuts to Italy and Japan. The cheaper products of the country struggle precariously to maintain a footing in these remoter markets.

The chief non-Egyptian imports are cotton and artificial silk piece goods from Japan and Great Britain; machinery, tools, iron and steel ware from Great Britain; silk goods from Japan, China and India; coffee from Abyssinia and Kenya; wheat flour from Australia; sugar from Cuba and the West Indies via the United Kingdom; coal from Great Britain and South Africa; boots and shoes from Japan and Czecho-Slovakia; and tea from Java, India and China. Of all these imports the one whose fluctuations

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most accurately reflect the varying state of prosperity of the natives is sugar, the wholesale trade in which is a Government monopoly.

It will be apparent from the foregoing account that the problem of economic development in the Sudan falls mainly under two heads—the cheapening of transport and the discovery and exploitation of new products sufficiently valuable to bear the cost of exportation. There is also the possibility of increasing the internal interchange of native products. This is partly a matter of transport and partly of stimulation of production and organisation of exchange. Research is proceeding in all these directions and may be expected to lead to a gradual expansion of trade.

In conclusion, mention must be made of various proposals which have been mooted, all of them having the same tendency—to establish in the country manufacturing industries to produce commodities now imported. Of these, the principal schemes have been for cigarette factories using improved varieties of locally-grown tobacco, power mills grinding Sudan wheat, cotton mills spinning and weaving cotton grown in the country, and soap factories using locally-produced oils.

These all claim the advantages that they would keep money in the country and give additional employment to its population. It is clear, however, that, if the four industries mentioned were all established and were successful to the point of excluding the whole of the present import of the commodities concerned, then, in the absence of any excise or other new tax, the Government would lose a very serious proportion of its revenue, even making generous allowance for the extent to which indirect returns from the money kept in the country would offset the lost import duty and railway freight. And it is very

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doubtful whether, if additional taxation were imposed on a scale to compensate for this loss, the local products could compete with those at present imported. It therefore seems unlikely that the Sudan will change to any considerable extent its present economic rôle of exporter of raw produce and importer of manufactured articles.

Note.—Full information on the agricultural aspects of the Sudan will be found in a brochure of the Agricultural Dept. entitled *The Cultivated Crops of the Sudan, including Cotton*, by W. A. Davie, M.A., B.Sc. (Agric.).

THE GROWTH OF SUDAN COMMUNICATIONS

By Col. W. E. LONGFIELD, R.E. (ret'd.)

Formerly of the Sudan Railways

DURING the fifty years that passed after the conquest of the Sudan by Mohammed Ali nothing was done to improve either the internal communications of the country or the trade routes which linked it with Egypt and with the outer world.

Then, as now, there were two ways of entering the Sudan—the Nile Valley route from Egypt, and the desert route from the Red Sea; by either route the journey took three weeks, and in respect of danger and discomfort there was little to choose between them.

Travellers by the Nile route had two alternatives on reaching Assuan. They could either go on to Shellal at the head of the first cataract and travel thence by steamer or sailing boat to Korosko, from which place the old caravan road led across the desert by way of Murat Wells to Abu Hamed on the Nile; or they could take the alternative route—little used except by Arab traders and camel-men—which ran direct from Assuan to Berber to the eastward of the Korosko–Abu Hamed road. From Berber or Abu Hamed onward to Khartoum the journey was made by camel, sailing boat or steamer or a combination of all three, depending on the height of the Nile and the season of the year.

The Growth of Sudan Communications

The other route from Egypt to the Sudan was by way of the Red Sea and Suakin, and thence across the desert for 260 miles by the caravan road to Berber. This was the principal trade route of the Sudan in bygone days, and was the road by which the ivory, slaves and gold—the staple exports of the Sudan—found their way to the coast for shipment to Suez or Jeddah, or the towns of Southern Arabia and the Persian Gulf. The Nile route was little used except by officials and travellers—the trade of the country was carried by camels over the Suakin-Berber road.

To unite the Sudan with Egypt by railway and steamer, and so bring Khartoum within five or six days' journey of Cairo was the dream of successive Viceroys. Said Pasha entertained the idea in 1860, but the finances of Egypt were in no state to bear the cost of such an undertaking.

Said's successor, Ismail, was not the man to be trammelled by such considerations, and amongst other ambitious schemes, launched the great project for the construction of a railway from Wadi Halfa to Metemma and Khartoum with branch lines to the Red Sea and to the Western provinces of Kordofan and Darfur.

Let us consider for a moment the extent of the whole scheme :

- (1) A line from Wadi Halfa to Metamma, 500 miles.
- (2) A line from Abu Gusi to El Fasher, 500 miles.
- (3) A line from Shendi to the Red Sea, 400 miles.

A total of some 1,400 miles of railway line which—at a moderate estimate—would have cost from seven to eight million pounds to construct and equip. The actual outcome of this colossal scheme was the construction of 33 miles of railway from Wadi Halfa to Sarras, which cost the Government £450,000: and in 1878 General

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Gordon, then Governor-General of the Sudan, persuaded the Egyptian Government to cease all further work. "A railway," he said, "was too exotic a plant to flourish in the Sudan."

The foregoing outline of the earliest project for the development of railway communication in the Sudan shows that the essential principles had then been grasped which during the next fifty years were to govern railway building in the country. To connect Khartoum with Wadi Halfa, thus placing the capital of the Sudan within easy reach of Cairo ; to provide an outlet for trade by building a railway to the Red Sea ; to link up the western provinces with the central line of communication ; to open a route to the eastern Sudan and the Abyssinian border—all these aims had been foreshadowed in the first great scheme of railway development, but fifty years were to pass before they were all attained.

There is no need here to recapitulate the events which led to the campaign of 1896-1898 and the final reconquest of the country. The story has already been told of the Mahdi's rebellion ; of the fall of Khartoum ; of Gordon's mission ; of the failure of the Relief Expedition and of the final decision to abandon the Sudan.

In the Gordon Relief Expedition of 1884-1885 the short length of railway that connected Halfa with Sarras played a useful, if minor part. It circumvented the most difficult part of the second cataract and a better use of it might have changed the result of the campaign. Later in the campaign, when the British forces were retiring northwards, the railway did good work both in transporting the troops and in carrying the thousands of refugees who were fleeing from Dongola before the advance of the Dervish army.

During the spring and early summer of 1885 while the question of abandoning or retaining the Sudan was still in

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the balance, the railway was carried forward from Sarras to the fort of Akasha, some 86 miles south of Halfa. This extension of the line had, as we shall see, an important effect on the course of the Dongola Expedition eleven years later.

A brief reference may here be made to the Suakin-Berber Railway project of 1885. After the fall of Khartoum the British Government was being strongly urged to adopt a "forward" policy in the Sudan and with a view to giving effect to this policy it launched, on its own initiative, the Suakin-Berber Railway scheme. The difficulties inherent in such an undertaking had not been adequately realised; it was planned in haste, the arrangements for the despatch of material and for the execution of the work were alike defective, the tribesmen of the Suakin district were actively hostile and work proceeded haltingly. Within two months of the inception of the scheme, it was decided to abandon the Sudan and work on the railway was stopped, after some twenty-two miles of line had been laid.

During the eleven years that passed between 1885 and 1896 the whole Sudan southward from the fortified camp at Halfa and westward of the line of forts that ringed the town of Suakin lay under the hand of the Khalifa. Between Halfa and the outpost at Sarras Fort an intermittent service was maintained by an armoured train whose crew, covered by the rifles and Gatling guns of the military escort, cleared the drift-sand from the track and relaid the rails torn up by the Dervish raiders.

The story of railway building in the Sudan has hitherto been a story of failure. Of Ismail's great scheme all that had materialised was the eighty-six-mile stretch of badly-laid track between Halfa and Akasha; of the Suakin-Berber railway project nothing remained but twenty miles of low embankment, eroded by the rains and in places

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barely traceable, and a rusting scrap-heap on the shore of Suakin harbour. With the opening of the Nile campaign in the spring of 1896 the story changes: henceforward it is to be a record of unbroken success.

During the years which immediately preceded the launching of the Expedition, Sir Herbert Kitchener, the Sirdar of the Egyptian army, had set himself to study and solve the problem of transporting and supplying an expeditionary force operating from Halfa, or other base on the Nile, and he had in fact taken certain preliminary measures in view of a campaign of reconquest which he knew could not be long delayed.

The project which he had first in mind was for the building of a railway from Korosko on the Nile to the wells of Murat along the line of the old desert caravan-road which for ages had been the main trade route between Egypt and the Sudan. Such a railway would be free from all risk of damage by raiding parties, for its route lay too far from the Nile and the desert road was in the hands of the friendly Ababda tribe. The ultimate goal would be Abu Hamed, the "key position" for any military force operating in the Northern Sudan.

A survey of the route between Korosko and Murat was made in the autumn of 1895, but the decision to launch the Dongola Expedition in March, 1896, involved the abandonment of the Korosko scheme and the concentration of all available effort on the southward extension of the Halfa-Sarras railway.

In March, 1896, the railway from Halfa ran no further than Sarras. The extension to Akasha—55 miles beyond Sarras—laid in 1885, had been wrecked by the Dervishes who had torn up the track and burnt the sleepers; but the embankment remained and most of the rails were undamaged.

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The available rolling stock consisted of two engines used on the 1885 expedition, and some thirty dilapidated wagons ; the rest of the rolling stock was either on the scrap-heap or else was partially dismantled to supply spare parts for whatever was serviceable. Such were the conditions when the expedition started and railway construction began.

For one hundred miles south of Halfa the Nile flows through a narrow valley known to the Arabs as the *Batn el Hagar*, or Belly of Rocks. The ground on either bank falls steeply and often precipitously to the water's edge and is seamed by ravines and broken by outcrops of granite ; the current of the river is rapid and its course is impeded by innumerable reefs and rocky islets. At the head of the *Batn el Hagar* and just beyond the southern limit of the broken country lay the village of Kosha—105 miles from Halfa. Southward of Kosha the Dervish forces occupied the whole riverain area of the Dongola province.

Kitchener's plan of operations may be outlined thus : As soon as the railhead had advanced sufficiently near Kosha he would move his whole force up from Halfa and attack the Dervishes, clear the country of the enemy and then extend the line to Kosha, where an advanced base would be established preparatory to a further advance as soon as the Nile rose. Between Kosha and the village of Kerma, a hundred miles further south, the river is navigable only during the flood season, and the execution of the plan depended, therefore, on the railway reaching Kosha in time to allow the Sirdar to take advantage of the high Nile. It will thus be seen that the railway engineers had just four months in which to lay some seventy miles of track and build twenty miles of embankment.

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By the end of May the railhead had reached Ambigol Wells some sixty-four miles from Halfa, and construction was suspended while the troops were being moved up. On June 6th the Sirdar's forces attacked and routed the northern Dervish army at the battle of Firket, a few miles from Kosha. On August 4th the railhead reached Kosha and preparations were begun for a further advance.

The Nile was rising fast during August and the Sirdar's preparations for the advance southwards by river were all but complete when an unexpected catastrophe threatened to delay the whole forward movement for a year. A storm, such as had not been known within living memory, swept the so-called "rainless" district, and between August 27th and 31st seventeen miles of railway were washed away by the floods. The situation was grave. Within a fortnight the Nile would begin to fall rapidly and the gunboats and steamers might be unable to pass the rapids of Kaiibar and Hannek. Every man was set to work and Kitchener himself worked with the repairing gangs. The repairs were finished on September 6th. Nine days later the whole force was concentrated seventy-five miles south of Kosha and on September 19th the action of Hafir was fought and the remnants of the main Dervish army in the Northern Sudan were in full flight. Early in October the Nile valley up to within one hundred and fifty miles of Abu Hamed was occupied by the Sirdar's forces.

Writing in *Modern Egypt* Lord Cromer sums up the situation in these words :

"In the spring of 1896 it was possible to advance reasons of some weight in favour of postponing the conquest of the Sudan. In the autumn of the same year it was not possible to adduce a single valid argument in favour of remaining inactive and delaying the completion of the work which had been already begun."

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This was the view taken by the British Government and Kitchener was authorised to put his plan into execution.

Since the plan and conduct of the campaign depended on the opening up and the maintenance of an adequate and secure line of communication, it will be convenient here to review briefly the position as it stood at the beginning of 1897.

There were three courses from which to choose : first, the Halfa-Kosha line might be carried on through Dongola to Debba or Korti and a base might be established at either place whence operations could be directed by river against Abu Hamed, and by the desert route against the Dervish forces at Berber or Metemma. The railway could be extended across the Bayuda desert from a base on the left bank ; a ferry would in time be replaced by a bridge. In favour of this plan it was possible to urge that Dongola had already been occupied and that the railway would soon reach Kerma, thus providing safe and adequate communications by rail and river for 300 miles into the enemy's country. In effect, why abandon 200 miles of railway now nearing completion for a new and possibly more difficult line of advance ?

These considerations were not without weight, but there were grave objections. For one thing, railway building in the Bayuda Desert would have been too hazardous a business while Berber and Metemma were still held by the enemy : there was also the likelihood of constant attacks being made on the railway by raiding parties from the oases to the west ; and further, the break in the line where it crossed the river would have added both to the military and the engineering difficulties of the undertaking.

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Added to these objections was the fact that the first 100 miles of the line from Halfa would have to be completely reconstructed before the railway could meet the demands of the Army transport and carry the material for its own extension. To straighten out the more violent curves and level the heavier gradients would have meant re-aligning the whole railway and replacing the ramshackle permanent way with new material laid along a more accommodating route.

Behind all these immediate considerations we may, perhaps, assume that Kitchener had in mind the future of the Sudan; the Kerma line, even if improved and re-laid, could never adequately serve as the main artery of communication between the Sudan and Egypt.

The second of the three suggested courses was to build a railway from Suakin to Berber; the distance, said its advocates, was no greater than that from Korosko or Halfa to Abu Hamed; and when peace was established the Sudan would have a direct route from its capital to the sea. The objections to this course were decisive. Osman Digna and his tribesmen were still a power in the Red Sea hills where water was plentiful and raids would be easy; and to occupy and guard the line of country which the railway would traverse meant in itself a military undertaking of no small magnitude. Apart from this, the physical difficulties of the route would have prevented rapid construction; the gradients on the old caravan road were known to be even more severe than those of the Halfa-Kosha line and no other practicable route was then known. To examine and survey the country with a view to finding an easily-graded route was impossible so long as the hill-country was in the hands of an active enemy.

Had the Sirdar not been hampered by considerations

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of time and money it is at least conceivable that the Suakin-Berber route might have been selected, but the financial stringency in Egypt and foreign activities in the neighbourhood of the Upper Nile combined to enforce both speed and economy in the conduct of the coming operations.

One other course remained : to build a railway across the desert from Halfa to Abu Hamed and then to extend it southwards along the Nile Valley. Little was known of this route. The Arabs who patrolled the country from their headquarters at Murat Wells said that there was no water, that the ground was good for camels over such parts of the route as they knew and that there were no high hills lying athwart the proposed line. Translated into language of the engineer this meant that the building of railway embankment would be easy, that there would probably be no very difficult ground to traverse and that the progress of the railhead would be rapid. On the other hand, there was no water, for the need for speed and economy forbade the possibility of taking the railway by the Wells of Murat.

The Sirdar decided to launch the railway from Halfa. The plan which he framed for the conduct of the future operations may here be briefly indicated. The railway to Kerma would be finished in May and would then begin to carry stores and supplies for the army in Southern Dongola, and to transport the additional river-craft which the army would need as soon as its advance began. Work on the desert railway would begin forthwith and would be carried on with such labour and rolling stock as could be spared from the service of the Kerma line. Upon completion of the Kerma line the whole of the construction staff would be transferred to the desert railhead which would then be pushed forward with all speed.

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The force in Dongola would advance and attack the Dervishes in Abu Hamed as soon as the level of the Nile had risen sufficiently to admit of the gunboats being hauled up through the cataracts. By that time the desert railway should have reached a point about 100 miles from Abu Hamed and as soon as that place had been cleared of the enemy, the track would be carried forward as quickly as possible and would reach Abu Hamed well before the end of the year. It is interesting to note how the plans for the military operations were interlocked with those for the building of the railway, and how the outcome of the whole scheme would be the provision of a direct line of railway linking the Sudan with Egypt.

Work on the desert railway began in January, 1897, but, as has been pointed out above, no rapid progress was made until the line to Kerma was finished. By the end of April only some thirty-four miles of track had been laid, but the country ahead had been reconnoitred by Lieutenants Pritchard and Hall of the Royal Engineers up to and some miles beyond the highest point of the desert plateau midway between Halfa and Abu Hamed. The report of these officers was satisfactory, and showed that there were no engineering obstacles in the way.

By the end of June ninety miles of track had been laid. The ultimate success of the Sirdar's great venture was assured, even though the need of supplying immense quantities of water might in the later stages of construction, involve a reduction in the quantity of material supplied daily to railhead. Any fear that progress might be delayed owing to this cause was set at rest by the discovery on June 28th of water at a point seventy-seven miles from Halfa—the Sirdar could thereafter count with reasonable certainty on having the railway completed to Abu Hamed before the end of the autumn.

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Throughout the summer the railhead moved steadily forward under the command of Lieutenant Midwinter of the Royal Engineers ; track-laying proceeded with machine-like regularity ; forty miles of line were laid during August, and on the 27th of the month a " world's record " was set up when two miles and eighty yards of track were laid in one day.

On August 7th Abu Hamed was captured and the key of the whole Northern Sudan was in the Sirdar's hands. Three days later the news reached railhead, and Lieutenants Pritchard and Macauley of the Royal Engineers started at once to reconnoitre the 100 miles of country that lay between railhead and Abu Hamed ; they found that there was no obstacle to rapid railway construction. The discovery in September of water at a point 126 miles from Halfa set at rest all doubts as to the future working of the line ; there would be two watering stations on the run of 230 miles across the desert.

On October 31st the rails were laid into Abu Hamed. Forty-seven miles of track had been built during the month, and on one day 5,033 yards were laid. In six months 197 miles of railway had been constructed and the work had been done during the hottest parts of the Sudan summer. The Sirdar's project had been carried into execution and the time of transit between Halfa and Abu Hamed had been reduced from eighteen days to twenty-four hours.

The defeat of the Dervishes at Abu Hamed was followed by their evacuation of Berber, and it became necessary for the Sirdar to occupy that town without delay. Troops were pushed forward as quickly as possible and a chain of posts was established on the 130-mile stretch of river between Abu Hamed and Berber.

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The line of communication between Abu Hamed and Berber was an awkward one. The navigable waterway of the Nile was interrupted at two places by cataracts where all cargoes had to be landed and carried by camel convoys for several miles to the open water at the head of the rapids. The delays, the loss of stores and the difficulties inseparable from such a line of communication made the extension of the railway a matter of the first importance. By the middle of January, 1898, the material for the railway extension began to arrive, and by March 10th railhead had reached Bashtenab at the head of the first of the two cataracts and seventy-five miles from Abu Hamed.

During the latter part of March news was received that a large Dervish force under the Emir Mahmud was moving north-eastwards across the country between the Nile and the Atbara. The object of the move was clear; Mahmud intended to outflank the Anglo-Egyptian force and strike at its communications.

On hearing the news the Sirdar concentrated his force at Kenur—a village on the Nile a few miles to the north of its confluence with the Atbara. A few days later it was known that Mahmud had crossed the Atbara and the whole force moved out of Kenur to meet him. The action known as the Battle of Atbara was fought on April 8th. Mahmud was taken prisoner and his army was all but annihilated. This was the only serious attempt on the part of the Dervishes to attack Kitchener's line of communications, and after it had failed no further danger of the sort was to be apprehended.

When the Battle of the Atbara was fought railhead was still in the Abu Sillem desert* and on May 5th the

* The line, as originally laid, made a wide detour through the Abu Sillem desert to avoid the difficult ground near the river.

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track reached Abidia. There sidings were laid out and the new gunboats, transported in sections from Halfa, were erected and launched, the railway was pushed forward steadily and on July 3rd reached Fort Atbara.

"On the day when the first troop train steamed into the fortified camp at the confluence of the Nile and the Atbara the doom of the Dervishes was sealed"; so wrote Mr. Winston Churchill in *The River War*. The campaign of re-conquest was nearing its close. Of the military operations which culminated in the Battle of Omdurman on September 2nd, 1898, it is not necessary here to speak, it is sufficient to note that Fort Atbara was only thirty-six hours distant by rail from Halfa, and as soon as the Nile rose, the Expeditionary Force would have a clear and easy line of communication between its place of concentration at Fort Atbara and its final objective at Omdurman.

"Scarcely had the guns of the battle of Omdurman died away," wrote Lord Cromer in *Modern Egypt* "when works were commenced with a view to extending the Nile railway from the Atbara to Haljaia opposite Khar-toum." During the dry season from November to June the Atbara river dries up into a series of pools separated by broad stretches of sand. As soon as the river had fallen sufficiently, it was a simple matter to lay a temporary line across the bed of the river and to build a short culvert of wooden baulks and piles across the shallow channel where the water was still flowing. The work was finished by the end of October and a temporary railway depot with sidings and workshops was established on the south bank. The permanent bridge was completed in August 1899.

The survey of the line was begun and working parties were sent forward to make the embankment in advance of the permanent way material which could not arrive

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for some months. By the time the rails and sleepers began to arrive, forty miles of embankment had been built, and for some time the bank-work and track-work were carried on independently. Railhead was supplied from the depot at "Atbara South," and "bank-head" maintained communication with the base by means of the *Bordein*—one of Gordon's steamers during the siege of Khartoum.*

In the early summer of 1899 the railway reached Shendi, and a small depot was established there. Its position half-way between Atbara and Khartoum made it a convenient place for a small engine shed, and it had a further advantage in that there was always deep water close under the river bank, so that steamers could lie up alongside the railway sidings.

In November the line reached the village of Geili on the Nile, and only twenty-five miles of level country remained to be traversed. On December 31st, 1899, the rails were laid up to the bank of the Blue Nile opposite Khartoum.

The completion of the railway from Halfa to Khartoum brought Cairo within five days' journey of the capital of the Sudan; the Kerma line, two hundred miles in length, linked the Dongola province with Halfa. At the opening of the year 1900 these two lines comprised the railway system of the Sudan. 750 miles of railway line had been laid in little more than three and a half years; two-thirds of the work had been done against time and under war conditions; the whole of the work had been carried out with the most rigid economy. At Halfa alone was

* The *Bordein* started life as a "penny steamer" on the Thames. She did valuable service during the siege of Khartoum. Her steam-pressure was unknown, and the only test of this was the whistle. She was just able to move against the current of the Nile and maintained a spasmodic service between Bank-head camp and Atbara.

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there any adequate provision for the repair of rolling stock ; at the other depots—Abu Hamed, Abidia and Shendi—the equipment consisted of rough shelters and a few essential tools ; pumps and tanks were erected at the watering stations, and the passing-places of the trains were linked by telephones. Except at Halfa there were no quarters for the staff. South of Abu Hamed a beginning had been made on bridging some of the larger water-courses. The best that could be said of the rolling-stock was that it was adequate for the purposes of the campaign and would therefore be adequate to meet the slender requirements of the Sudan trade in the early days of the re-occupation.

Such, in brief, was the condition of the Sudan railway system at the beginning of the year 1900. As has been indicated above, the two lines of railway that made up the system converged at Halfa, and through Halfa for the next seven years passed the slowly increasing trade between the Sudan and the outer world.

Mention has already been made of the disadvantages of the Nile route between Cairo and Halfa. During the years of the expedition some improvement had taken place by reason of the extension of the standard-gauge railway to Luxor, and the construction of a narrow gauge line from Luxor to Assuan. Passengers could thus travel by rail from Cairo to Shellal in twenty-one hours, and embark at the latter place for the river journey to Halfa ; but the break of gauge at Luxor seriously hampered the use of the line for goods traffic. Above all it must be borne in mind that Halfa was 900, and Khartoum nearly 1,500 miles from the nearest seaport by the Nile Valley route. The potential resources of the Sudan were great, but for their development some shorter and better route to the sea was the first necessity.

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Within eighteen months of the date on which railhead reached Khartoum the initial steps were taken for the examination and selection of a suitable route.

For many centuries the trade of the Sudan had found its way to the coast by the caravan road from Berber to Suakin : but the engineers who attempted the survey of the line in 1885 found, though they only explored the fringe of the hills, that the old camel road would be a difficult and unsatisfactory route for a railway owing to the steep gradients and numerous deep rock cuttings which would be necessary. A railway with heavy gradients is expensive to work and is a severe handicap to trade, and so the preliminary surveys were directed towards finding an easier and better-graded route than that followed by the old caravan road.

The main watershed of the hills which border the Red Sea from the Gulf of Suez to the Abyssinian plateau lies at a distance of some forty miles or less from the coast. On the eastern side the hills fall abruptly to the maritime plain, on the western side the land slopes away gradually to the open desert which extends to the Nile. It was therefore almost certain that any route lying directly athwart the axis of the main range would involve very steep gradients between the watershed and the maritime plain. The aim of the surveyors was therefore to find, on the seaward side of the watershed, a route which ran parallel to, and not across, the direction of the main range. Such a route—the Sinkat Valley—was found, and the detailed survey showed that a railway could be built through the hill country with gradients no steeper than 1 in 100, and without involving tunnelling or other heavy engineering work.

As soon as these all-important facts were established the work of making a base at Suakin was begun. The

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harbour of Suakin was small and the entrance to it from the open sea was by a narrow channel, thirty miles long, between the mainland and the outer fringe of coral reefs, and thence by a tortuous approach into the actual anchorage. But as a base from which to build the railway, the place had certain advantages ; it was well known to the shipping community, it had a fair water supply, and the town and its market would be of use in supplying the needs of the employees.

Work there began in 1903. Sidings were laid down and large pontoons were built against which ships could lie when discharging their cargoes ; workshops were erected and equipped, and a condensing plant to provide additional fresh water was installed.*

The actual work of laying the track began on September 1st, 1904, but no such rapid progress was possible as that which had been made on the Halfa line ; once the line had left the maritime plain and entered the hill-country the ground became rocky and uneven, and since railhead soon far outran the bridging-gangs who followed, many delays were caused by the washing away of the track.

Meanwhile on the western section of the route, "the Atbara railhead," as it was called, was being pushed out to meet the line advancing from Suakin, and on October 15th, 1905, the railheads met at a point 120 miles from the Nile. Through communication had been established between the Nile and the Red Sea.

The disadvantages of Suakin as a port were, however, becoming increasingly apparent. The long approach

* The dangers of the seaward approach to Suakin were vividly shown in January, 1904, when the S.S. *Afghanistan*, bringing out the first set of condensers, ran ashore some thirty miles north of Suakin and became a total wreck.

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channel might perhaps have been reasonably safe by lighthouses and beacons, the tortuous entrance might have been improved and straightened by dredging the coral rock, but nothing could be done to enlarge the anchorage or to provide adequate quay-space.

Thirty-five miles to the north there was an inlet known to the natives as *Mersa Sheikh Barghut*. The coasting vessels of the Red Sea used it as a harbour of refuge in heavy weather; its entrance was directly opposite to a wide gap in the barrier reef, the deep-water area was far larger than that of Suakin harbour. The Sudan Government began to consider the possibility of developing the new site and making it the principal port of the country. The British Admiralty was consulted on the matter and returned a favourable reply; a joint commission representing the Sudan Government and the Egyptian Ports and Lights Administration examined the harbour and its seaward approach and gave it as their considered opinion that the new harbour had in every way the advantage over Suakin and was far better fitted to become the chief seaport of the country.

The first step was to link the new site with the railway, and by the end of the year 1905 the harbour of Mersa Sheikh Barghut, now re-named Port Sudan, was connected by railway with the Nile Valley and Khartoum. On January 27th, 1906, the Nile-Red Sea Railway was formally opened by Lord Cromer.

The construction of deep-water quays, warehouses and the necessary government buildings was begun forthwith. The erection of the lighthouse on the point of the outer reef and of leading lights on the shore was put in hand, and Port Sudan began to develop rapidly into a safe, commodious and well-equipped port for the trade of the Sudan.

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While the construction of the Nile-Red Sea railway was in progress steps were being taken to re-cast the system of railway communications in the Northern Sudan.

The Kerma line was dismantled, the track was pulled up and such of the material as was usable was laid down again on a new line connecting Dongola province with Abu Hamed. Two months after the opening of the Red Sea railway the Kareima line was opened for traffic; workshops were built to meet the needs of the steamers and tugs plying on the reach, and Kareima became the new "port" of the Dongola province.

Atbara junction had already been chosen as the site for the railway headquarters and for the central depots of the locomotive and engineering departments. The building of houses, workshops, offices and stores had begun some months before the opening of the Red Sea line; and a few weeks after this event the administrative headquarters of the whole railway system were transferred from Wadi Halfa to Atbara.

The completion of the line from Halfa to Khartoum marked the end of the first stage in the growth of the railway system of the Sudan; the second stage ended with the opening of the Red Sea and Kareima lines: the third stage was now about to begin with the extension of the railway into the Gezira and Kordofan.

Khartoum was now linked with its seaport by a direct railway, 500 miles in length: the line to Halfa gave direct access to Egypt, and the new Kareima line served the needs of Dongola.

South of Khartoum the waterways of the two Niles were the only means of communication, and the Blue Nile was navigable for only six months in the year. From the fertile districts of Wad Medani and Sennar the produce of the country came down by boat to Khartoum, and the

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gum from the forests of Kordofan was brought down to the White Nile and shipped on native boats at El Dueim, or was carried on camels direct from the interior to the great gum-market at Omdurman. The cattle trade of Kordofan as yet hardly existed.

For the development of the great resources of these areas the extension of the railway system south of Khartoum was the first necessity. The claims of the Eastern districts of the Sudan—Kassala and Gedaref—could be dealt with later; but, once Khartoum had been placed in direct touch with the sea, the need of opening up the fertile districts, whose northern apex was marked by the confluence of the two Niles was obvious and urgent.

The first step was to build a railway bridge across the Blue Nile at Khartoum. This was an engineering work of considerable magnitude, for the Blue Nile in the flood-season brings down nine-tenths of the whole volume of the Nile flood, and the scour of the swift current made it necessary to sink the piers seventy feet below the river bed.

Work was begun in the autumn of 1907 and the first locomotive crossed the bridge on April 1st, 1909. The work was completed in October, and the extension of the railway southward from Khartoum was commenced later in the year.

The physical conformation of the Northern Gezira* is such that the low watershed between the White and Blue Nile lies generally within a few miles of the latter. It was therefore possible to select a route for the railway on ground immune from the risk of damage by flood and at the same time close to the villages and the fertile land adjoining the river.

* *Gezira* (Arabic) = Island: the name applied to the district lying between the Blue and the White Nile.

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From Wad Medani, the capital of the Blue Nile Province and the chief market of the district, the railway was carried on to Sennar, where surveys and borings were in progress, with a view to the building of the great dam. Sennar had been at one time a place of importance and the chief town of the Fung Province, but it had shrunk to a small village, and its place as the entrepôt of the Blue Nile trade had been taken by Wad Medani. With the coming of the railway Sennar, or rather the neighbouring village of Makwar, was soon to attain importance as the site of the great reservoir-dam which was to impound the surplus flood-water of the Blue Nile and irrigate 300,000 acres of fertile land between Sennar and Wad Medani. The Sennar dam was also to serve the valuable purpose of a railway bridge across the Blue Nile, thus making it possible to provide a shorter route to the sea from the Southern Gezira and Kordofan whenever Kassala and Gedaref should be linked by railway with the main line to the Red Sea. From Sennar the railway was carried on south-westward across the open plain of the Gezira to the village of Hillet Abbas, 200 miles south of Khartoum.

The bridging of the White Nile at Hillet Abbas was a far easier undertaking than the bridging of the Blue Nile at Khartoum. The depth of the foundations was less and the current of the river too sluggish to cause any risk of deep "scouring" round the piers.

The work was carried out as in independent undertaking, the material and plant being sent up by river from Khartoum, so that when the railhead reached the eastern bank the bridge was already completed. The bridge was opened for traffic in the spring of 1911, and in the autumn of that year work was begun on the extension of the railway from Kosti—a small village and market some

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five miles down stream from the bridge—towards El Obeid.

The distance from Kosti to El Obeid is 190 miles and the railway traverses the flat, scrub-covered plain of Eastern Kordofan, deviating slightly to the southward of a direct line in order to pass by the wells of Um Ruaba and Rahad. These two villages were ruling points on the Kosti-El Obeid line, both because they were the only two places where water was immediately available and because the surrounding districts comprised some of the best gum-forests of the Province and some of the best grazing grounds for cattle.

Throughout a great part of Eastern Kordofan water is very scarce, and to improve the supply deep bore-holes were sunk at various points along the line of route and an abundant supply of water was found at depths ranging from 300 to 500 feet. Not only did this increase the efficiency of the railway by reducing the dead-load of the trains, but also conferred on the native population the benefit of an increased water supply for their herds; thereby helping to foster the cattle trade which soon began to grow to importance.

The track reached El Obeid at the end of 1911, and on February 27th, 1912, the formal opening of the line took place at El Obeid in the presence of Lord Kitchener and the Governor-General.

The opening of the El Obeid railway marked the end of the third stage of railway development in the Sudan. The valley of the Blue Nile between Khartoum and Sennar—the most fertile tract in the country—was now traversed by the railway: the extension of the line across the White Nile into Central Kordofan opened up to trade the gum-producing areas and the extensive grazing grounds of that province; the less settled areas of Western

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and Southern Kordofan were made more accessible and were brought into closer touch with Khartoum. It remained only to link the Eastern Province of Kassala northwards with the Red Sea railway and southwards with Sennar to complete the system of railway communications as it exists to-day ; but twelve years were to elapse before the final stage was reached.

The opening of the railway along the Blue Nile and into Kordofan gave a great impetus to the trade of these provinces in grain, in oil-seeds, in gum and in cattle, but no development of cotton cultivation on any large scale could take place until the Sennar Dam was completed. Preliminary work was, as has been stated, in progress while the railway was under construction, and was carried on during the two following years until the outbreak of the Great War brought the undertaking to a standstill. The war also caused the abandonment of the Kassala railway scheme for which surveys had been made and estimates prepared and on which work was to have started during the winter of 1914.

It was not until four years after the end of the war that conditions permitted the resumption of work which had been discontinued on the outbreak of hostilities ; and the first task of the Railway Administration was the building of the line to Kassala which had been projected and surveyed ten years before.

Reference has already been made to the question of opening up to trade the districts of the Eastern Sudan, and the building of a line which would connect Kassala with the Nile-Red Sea railway was clearly the best means of effecting this.

The importance of Kassala was due to its position at the head of the fertile delta of the River Gash, which has its source in the Abyssinian highlands and pours out its

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waters in the flood-season on to the level plain where they are split into numberless channels and ultimately lose themselves in the desert sand. Grain and cotton were extensively cultivated on this inland "delta" after the subsidence of the summer flood; water was everywhere near the surface, and the numerous shallow wells in the district afforded a plentiful supply of water for the flocks and herds of the native inhabitants. The building of a railway to Kassala, and its extension onwards to Gedaref and Sennar, would open up to trade a great fertile area in the Eastern Sudan and would in addition provide an alternative and shorter route to the sea for the trade of Kordofan and the Upper Blue Nile.

A point on the Red Sea Railway, 175 miles from Atbara, was selected as the site for the junction, whence the railway ran nearly due south to the town of Kassala. The construction of this section of the line involved no engineering difficulties and the railhead reached Kassala in April, 1924.

The final step in the development of the Sudan railway system as it exists to-day was the extension of the Kassala line south-westward to Gedaref and Mefaza, and thence across the Blue Nile at the Sennar Dam to a junction with the main Gezira line from Khartoum.

From an engineering point of view this was a somewhat difficult undertaking since it involved the construction of three large bridges; that across the upper part of the Atbara at Kashm el Girba, and those across the Rivers Rahad and Dinder, the two largest tributaries of the Blue Nile. The route, however, presented no other constructional difficulties, and the railway from Sennar via Gedaref and Kassala to the Red Sea was opened for traffic on February 15th, 1929.

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River Communications

The foregoing pages have dealt exclusively with the development of railway communication in the Sudan. It is well, however, to bear in mind, when considering the system of communications in the country as a whole, that the most southerly point of the railway—the bridge across the White Nile at Rabak—is no more than 200 miles from Khartoum, and that the Sudan-Uganda frontier lies some 900 miles further south. While, therefore, the railway provides the means of communication in the Northern Sudan, and links Kordofan and the Eastern Provinces with the sea, the only through line of communication in the Southern Sudan is that afforded by the waterway of the White Nile which is navigable by steamers from Khartoum to Juba, a distance of 1,100 miles. The establishment of a regular service of steamers to connect Khartoum with the Southern Provinces was one of the first tasks undertaken by the Government after the re-occupation of the country, and its accomplishment involved the slow and laborious work of opening a passage for river-craft through the barrier of the *Sudd*.

The *Sudd* region is a vast tract whose northern limit is some 600 miles south of Khartoum, where the White Nile spreads out on either hand and disperses its waters to form a swampy area many thousand square miles in extent.

During the years of the Dervish rule all navigation ceased, and the river became completely blocked with a dense floating mass of reeds and undergrowth several feet thick, which rendered the main channel completely indistinguishable from the surrounding swamp. The first difficulty of the *Sudd* cutting expedition was therefore to ascertain where the main channel of the river lay, and only by taking continual soundings could the clearing-party ascertain whether they were working on the main

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waterway, or merely clearing the *sudd* from the surface of a shallow lagoon. When the actual channel had been found the method of clearing a passage was as follows : first the surface growth of reeds and grass was set on fire and burnt, then deep trenches were dug in the floating mass of mud and tangled roots, hawsers were laid in the trench and made fast to the steamer which then backed away, hauling with it a floating island of *sudd* which was towed into the fairway of the river and allowed to drift away. The work was most arduous and was carried out under conditions of great difficulty ; but once a clear waterway had been cut the passage of steamers up and down the river served to keep the channel open.

Once the *sudd* region is passed the course of the White Nile is clear for navigation at all seasons as far as Juba, one hundred miles from the frontier of Uganda. From Juba a motor road, 130 miles in length runs to Nimule in Uganda, from which place there is communication by railway and steamer with Lake Victoria, the Kenya railway and Mombasa. The journey by steamer from Khartoum to Juba takes thirteen days, the return journey downstream takes nine, and a fortnightly service is maintained throughout the year.

Two subsidiary steamer-services connecting with the White Nile are maintained during the flood season : that to Nasser Post and Gambella on the Sobat River, and that by way of the Jur River to Wau, the headquarters of the Bahr-el-Ghazal Province.

The trading port of Gambella lies in Abyssinian territory and is the principal entrepôt for the exchange of trade between the Sudan and Southern Abyssinia. Between August and November steamers and barges loaded with goods proceed up the White Nile to Malakal and thence up the Sobat past Nasser to Gambella, bringing

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down on the return journey coffee and other produce from Abyssinian territory.

The Jur river service, which is also a flood service, is an important link in the communications with the Bahr-el-Ghazal Province, whose headquarters are at Wau. The Jur is navigable between July and October inclusive, and a fortnightly steamer service is maintained during the few months when the river is open. All the stores and supplies needed by the provincial administration for the year, as well as all the trade goods for the province, are carried to Wau during the time the Jur is open. When the river falls and the country begins to dry up after the rains, the only route to the capital of the province is by the 100 miles of road which link it with the Bahr-el-Ghazal, a tributary, at Meshra el Rek.

On the Blue Nile a regular service of steamers is maintained between the Sennar Dam and Roseires for six months of the year. The first steamer usually reaches Roseires towards the end of June; and the last regular service leaves Roseires towards the end of December, though under favourable river conditions, it is practicable to continue the service as late as February.

The tabular statement prepared by Mr. A. C. Parker, C.B.E., late General Manager of Railways, illustrates the growth of the railway and its allied services during the period under review :

| Year | Miles Open | RAILWAYS | | Ratio Expenses to Earnings % | Prod. Train Miles |
|----------|---------------|-----------|---------------------|---------------------------------------|-------------------------|
| | | Revenue | Working Expenses | | |
| | | £E. | £E. | | |
| 1900 ... | 778 | 146,512 | 113,550 | 77.5 | 490,090 |
| 1905 ... | 674 | 171,137 | 118,754 | 69.4 | 558,515 |
| 1910 ... | 1230 | 391,717 | 268,285 | 68.5 | 1,021,958 |
| 1915 ... | 1489 | 535,805 | 326,259 | 60.8 | 1,086,197 |
| 1920 ... | 1489 | 1,468,542 | 900,533 | 61.3 | 1,268,415 |
| 1925 ... | 1728 | 1,429,904 | 903,635 | 63.2 | 1,503,499 |
| 1930 ... | 1995 | 1,953,994 | 1,137,419 | 58.2 | 2,094,787 |

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RIVER SERVICES

| <i>Year</i> | | | <i>Revenue</i> | <i>Working Expenses</i> | <i>Ratio Expenses to Earnings</i> |
|-------------|-----|-----|----------------|-------------------------|-----------------------------------|
| | | | £E. | £E. | % |
| 1905 | ... | ... | 111,631 | 89,162 | 79.9 |
| 1910 | ... | ... | 132,082 | 117,758 | 89.1 |
| 1915 | ... | ... | 137,071 | 128,012 | 93.3 |
| 1920 | ... | ... | 380,622 | 241,409 | 63.4 |
| 1925 | ... | ... | 269,036 | 204,778 | 76.1 |
| 1930 | ... | ... | 324,765 | 271,901 | 83.7 |

Note.—a. Steamers, Shellal-Halfa Reach, were taken over by the Railways' Department in 1913.

b. Steamers, Dongola Reach, were taken over by the Railways' Department in 1914.

c. Steamers, Khartoum and South, were taken over by the Railways' Department in 1918.

HARBOURS

| <i>Year</i> | | | <i>Revenue</i> | <i>Working Expenses</i> | <i>Ratio Expenses to Earnings</i> |
|-------------|-----|-----|----------------|-------------------------|-----------------------------------|
| | | | £E. | £E. | % |
| 1910 | ... | ... | 10,771 | 15,932 | 147.9 |
| 1915 | ... | ... | 15,383 | 16,659 | 108.4 |
| 1920 | ... | ... | 54,894 | 62,414 | 113.7 |
| 1925 | ... | ... | 112,198 | 82,480 | 73.5 |
| 1930 | ... | ... | 152,850 | 139,060 | 91.0 |

Note.—Port Sudan Dockyard and Harbour were taken over by the Railways' Department in 1914.

ANCILLARY SERVICES

| <i>Year</i> | | | <i>Revenue</i> | <i>Working Expenses</i> | <i>Ratio Expenses to Earnings</i> |
|-------------|-----|-----|----------------|-------------------------|-----------------------------------|
| | | | £E. | £E. | % |
| 1920 | ... | ... | 59,171 | 77,639 | 131.2 |
| 1925 | ... | ... | 98,512 | 83,360 | 84.6 |
| 1930 | ... | ... | 155,689 | 137,138 | 88.1 |

Including the following Services :—

- | | |
|-----------------------------|--------------------------|
| a. Power Station, Atbara. | f. Ginning Factory. |
| b. Power Station, P. Sudan. | g. Grain Cleaning Plant. |
| c. Power Station, Halfa. | h. Ice Machines. |
| d. Catering Service. | i. Tokar Light Railway. |
| e. Condensers, P. Sudan. | j. Mechanical Transport. |

“ The realities here are that the Government released slaves and suppressed slavery ; they increased prosperity, gave education, protected the weak and the outraged, defended and taught strength and courage to those who were else the predestined victims of chiefs and priests ; fought disease and postponed death. So long as our species endures, these things will enter into the composition of its spirit and form part of its heritage. There is ultimately no other significance to human endeavour and no other reward.”

ODETTE KEUN.

PART V

EDUCATION IN THE SUDAN

By R. K. WINTER, C.M.G.

Sudan Political Service

I. HISTORICAL

WHEN the Sudan was re-occupied in 1898 the only form of education in existence was the *Khalwa* or Koranic school. Hundreds of these little schools were scattered about the Northern Sudan. Village children were taught a little reading, less writing, and to repeat the Koran. The teachers who, for the most part, were almost illiterate themselves, were entirely devoid of the art of instruction.

The classroom was a hovel: flies and filth were the daily portion of the pupils, many of whom spent seven or more years in attaining to the simplest standard of literacy. Nevertheless there existed, especially in the north, a desire for education: the people could appreciate the necessity for moral training of the young, and it stands to the credit of the *fiki*, or Koranic teacher, that many of his pupils, however ill-taught, are now trusted Sheikhs and Elders in the villages of to-day.

Lord Kitchener in 1898 laid before the British people his scheme for a system of education in the Sudan. Khartoum was to be the centre of the system and in his appeal

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for funds for the foundation of the Gordon Memorial College he said :—

“ Certain questions will naturally arise as to whom exactly we should educate, and as to the nature of the education to be given. Our system would need to be gradually built up. We should begin by teaching the sons of the leading men, the heads of villages and the heads of districts. They belong to a race very capable of learning and ready to learn. The teaching, in its early stages, would be devoted to purely elementary subjects, such as reading, writing, geography, and the English language. Later, and after these preliminary stages had been passed, a more advanced course would be instituted, including a training in technical subjects, specially adapted to the requirements of those who inhabit the Valley of the Upper Nile. The principal teachers in the College would be British, and the supervision of the arrangements would be vested in the Governor-General of the Sudan. I need not add that there would be no interference with the religion of the people.”

Mr. (now Sir Edgar) Bonham Carter, the Legal Secretary of the Sudan, undertook the task of starting the educational system early in 1900, and in the same year Mr. (now Sir James) Currie was transferred from Egypt to the Sudan, as Director of Education. Sir James Currie held this post for fifteen years and was mainly responsible for the planning of the system.

At the outset lack of funds forbade any great advance, but at the end of 1901 the educational institutions consisted of an Industrial School, two “ Higher Primary ” Schools, and a small training college for teachers in Omdurman.

The Gordon Memorial College was inaugurated on November 8th, 1902, and since that date steady expansion of education has taken place throughout the country.

II. THE EDUCATION SYSTEM

The education system of the Sudan falls into two spheres—the Northern and the Southern.

Education in the Sudan

The Northern comprises the Provinces of Berber, Blue Nile, Darfur, Dongola, Fung, Halfa, Kassala, Khar-toum, Kordofan, White Nile, and the Port Sudan-Suakin Administration. The indigenous population of this area is estimated at over three millions, all of whom are Mohammedans.

The Southern sphere consists of the Provinces of the Bahr el Ghazal, Mongalla and Upper Nile, the inhabitants of which are almost entirely pagans of negroid stock. The population is estimated at nearly two and a half millions. A small portion of the Upper Nile Province actually falls within the Northern sphere and an area in the Nuba Mountains district of Kordofan Province is in the Southern.

THE NORTHERN SPHERE

Khalwas and Government Schools

The Northern Sudan is a poor agricultural country, the resources of which do not promise any great economic development. The educational aim of the Government in this Northern sphere is to meet the needs of the people as a whole by a sound and widespread elementary education, which shall make the children more useful members of the society in which they have been born with due regard to the changed circumstances caused by the development of the country. At the same time the Government aims at supplying, through central educational institutions, the more advanced learning required for a necessarily limited number of entrants to the professions or commercial life.

There are six types of schools; the *Khalwas*, the Elementary Schools, the Intermediate Schools, the Gordon Memorial College, Technical Schools, and Girls' Elementary Schools.

Education in the Sudan

Khalwas

Scattered over the Islamic area of the Sudan, in towns, villages and Arab *feriks*, are some 1,500 *Khalwas* or Koranic schools, attended by possibly 60,000 pupils, (It is estimated that there are not less than a quarter of a million boys of six to twelve years of age in the Northern sphere.) The *Khalwa* is in charge of a *fiki* (religious teacher) whose post is frequently hereditary. It is an indigenous institution of ancient origin and its main object is the recital and writing of the Koran and the provision of moral training. The little reading, writing, and arithmetic which is provided in some *Khalwas* has always been a secondary consideration to religious instruction, but of recent years the Government has attempted to stimulate this provision by a system of grants or salaries and by short training courses for the *fikis*. There are 689 *Khalwas* with an attendance of 25,550 so assisted.

The *Khalwas* provide that religious and moral training which for geographical and economic reasons will, for many years to come, be all that is possible for some 85% of the population.

In certain Provinces a *Khalwa* may be able to take its place as a useful adjunct to the educational system and teach a simple standard of literacy, but it cannot be made the basic instrument for providing that sound and widespread elementary education at which the Government aims.

Elementary Schools

The Elementary School (*Madrassa awaliya*) was instituted by the present Government. There are eighty-seven Elementary Schools in the Northern sphere, directly staffed by the Education Department and with an attend-

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ance (1933) of 8,943 boys. These schools are mostly situated on the banks of the Nile or on the Railway system. The cost of this form of education is approximately £E.29,359 per annum. Education rates in certain places realise approximately £E.3,409 per annum. Elementary school education is free except in Khartoum and Port Sudan where small school fees are paid by a majority of the pupils.

The course is of four years, but in some schools the place of the first year is at present taken by the *Khalwa*. Boys enter at seven or eight years of age.

The curriculum aims at providing a thorough grounding in reading, writing, and arithmetic. The Koran and religion are taught, and elementary teaching in geography, history, hygiene, agriculture, and handwork is given. These Elementary Schools are the foundation stone of the Government's educational system, and are intended to give a type of education suited to the needs of the village and town boy whose life will be spent in ordinary native occupations such as cultivating, small village industries, and trade: the standard must be sufficiently high to supply boys for the Native Administration clerical staff, the Training College for Elementary Teachers and the Intermediate Schools.

The teaching staff of the Elementary Schools are trained in the Elementary Teachers' Training College described below. The service of these teachers was made pensionable in 1932. So far as possible they are selected in accordance with the local needs of individual Provinces and are employed near their own homes.

The supervision and encouragement of Elementary education is a part of the duties of District Commissioners in Provinces. The Regulations for Elementary Schools by a permissive clause provide for the assistance of the

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District Commissioner in his duties in this respect by a board of local native notabilities appointed by the Governor of the Province and known as the "Local Authority." From the beginning of 1934 further assistance to District Commissioners in the work of local supervision will be given by four specially selected District Commissioners, each one in a group of Provinces, known as Province Education Officers.

**The Intermediate School (Madrassa wosta).*

There is one of these schools in each of the ten most important towns in the Northern Sudan. They give a post-elementary course of four years to 1,094 boys at a cost of £E.14,906. School fees contribute £E.8,400; 20% of the fees are remitted, boys being taken free or at reduced fees. Except for a few boarders at four of these schools, the majority are day boys. Pupils are admitted by examination from the Elementary School between the ages of ten and thirteen.

Both in theory and in practice the chief function of these schools has been to supply a steady flow of boys to enter the Gordon College. A certain number of boys have been taken straight from the schools to fill subordinate posts in Government Departments but the tendency of recent years has been to prefer the more highly-trained Gordon College boy to the Intermediate School boy. The Intermediate school has thus been looked upon mainly as a preliminary to the Gordon College and not as a means of educating a large number of boys who would go no further.

The curriculum has a strong literary bias. The subject to which most attention is given is English.

* Intermediate schools were known as Primary schools up to 1933. The term "intermediate" more nearly describes their function.

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The Intermediate School of the future must be regarded as a local Province Town School, the main object of which is to give post-elementary education (with English) suitable for those engaged in local business and able to provide boys qualified for minor Province posts and requirements of local commerce. At the same time the Intermediate School will enable boys to qualify for entry into the Gordon College as before.

The Gordon Memorial College

This is the only secondary Government School in the Northern Sudan. It was founded as a Primary School by Lord Kitchener in 1902. Secondary (as opposed to Primary) education was started in 1905. The course is for four years. The curriculum is general with the addition of vocational training in the last two years for teachers, translators, book-keepers, clerks and boys preparing for the Kitchener Memorial School of Medicine. There are, in addition, a special engineering section and a *Kadis'* section. A commercial course has recently been added.

There are at present (in 1933) over 400 boys, three-fifths of whom are drawn from Khartoum and Blue Nile Provinces. The staff numbers forty-seven, including certain part-time appointments. Of the staff fourteen are British and the rest are Sudanese. A number of boys are educated free or at reduced rates.

Technical Schools

There are two technical schools in the Northern Sudan—one at Omdurman (the Omdurman Technical School) and the other at Atbara (the Atbara Instructional Workshops). Boys are drawn from those who have completed their Elementary school course and are taught carpentry, bricklaying, stone-cutting, smithing, fitting, etc. They also receive a small amount of further general education. The teaching is in Arabic only.

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(a) The Omdurman Technical School is under the control of the Education Department and has a British Head. The course is for four years and (in 1934) 130 boys are under instruction. The teaching is free and there are a large number of boarders (also free).

The school has had as its objective the supply of boys to meet the general demand for craftsmen that has arisen in the country (especially in the towns) since the re-occupation of the Sudan. The Omdurman Technical School was started in 1907 to teach stone-cutting. A Pottery Section was introduced in 1911 and continued until a limited number of boys had been trained as Potters. In 1932 the school absorbed the Gordon College Instructional Workshops which had been founded by Sir William Mather and opened in 1904.

(b) The Atbara Instructional Workshops train boys as fitters and blacksmiths for the Mechanical Engineering Workshops of the Sudan Railways, who control the school. There are seventy-one boys in the school. They receive free education and many of them are boarders (also free).

The Atbara Instructional Workshops were founded in 1924 on the closing of the Gordon College Workshops Mechanical Section.

In addition to the technical education given in these two schools, technical training is provided for boys in the Public Works Department, the Engineer Troops and the Mechanical Transport Section of the Sudan Defence Force.

The Training of Teachers

(a) Teachers for the Intermediate Schools, the Elementary Teachers' Training School and for the Gordon College are trained by a vocational course in the Gordon

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College. At the end of their second year in the Gordon College, a few boys are selected in accordance with their examination results, their character and personal wishes, and are given a course of training during their last two years. This section has been under the control of a British Master of Method since 1926. Before 1914 a Sheikhs' College existed (as part of the Gordon College) for training Teachers and *Kadis*. The course was a five years' one and in Arabic.

(b) Elementary School teachers are trained in the Elementary Teachers' Training School. They are selected in accordance with the probable needs of each Province—from the boys who have completed the Elementary School course and are given three years further general education with professional training.

In 1932 this school became a separate entity, having previously been a subsidiary attachment, first to the Omdurman Primary School, then to the Gordon College, and finally to the Khartoum Primary School. The present school has thirty-seven boys and a staff of five full-time and one part-time teachers. Board and tuition are free.

It was intended to remove this school in 1934 from the somewhat too urban environment of Khartoum to a site in one of the provinces among rural surroundings. At the same time the methods and scope of the course be altered and expanded: the school will be placed in charge of a British Principal and a British Agricultural Inspector will be attached to the staff.

Girls' Education

There are twenty-two Elementary Schools for Girls, situated mostly in towns along the banks of the Nile. They have an attendance of 2,059. Apart from a thorough grounding in reading, writing, and arithmetic and teaching

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of the Koran and religion, the work in school is mainly of a practical nature designed to stimulate powers of self-expression and self-reliance as well as to be of value to the girls in their future life. There are no fees.

The Principal of the Girls' Training College is also Controller of Girls' Education.

The difficulties and prejudices experienced in the early stages of Girls' Education are now rapidly giving way. There is a steadily increasing demand for these schools coming chiefly from those towns where men's education has already made some progress.

The number of girls' elementary schools has risen from five in 1920 to twenty-two in 1932.

The Girls' Training College, Omdurman, gives selected girls a further two or three years' education together with professional training for teaching. The number of girls under training in 1933 was twenty-nine. The marriage value of girls who have been educated at the Training College is considerably enhanced and few girls remain as teachers for more than four years.

The Principal of the College and her assistant are both British.

Headquarters and Supervisory Staff

The Headquarters staff in the Northern Sudan consists of the Director, who is also Secretary for Education and Health, an Assistant Director, two British and two Arabic Inspectors and Headquarters office staff.

The inspectorate is responsible for the inspection of all Government schools in the Northern Sudan, other than the Gordon College (where only the Arabic is inspected) and the Technical subjects in the two technical schools.

If possible, each Elementary School is inspected twice in the year—once by a British and once by an Arabic Inspector. The large number of Elementary Schools and

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the various other calls made upon a meagre staff make it difficult to keep in adequate touch with the schools.

Each Intermediate School is, if possible, inspected once in a year by a board from the Inspectorate which includes British technical experts (for Mathematics, Geography, Drawing and English).

* NON-GOVERNMENT SCHOOLS

The Comboni College belonging to the Roman Catholic Mission in Khartoum, which was opened in 1929, is a Secondary School for boys of non-Sudanese nationality. The masters are Canadian lay-brothers. The Coptic Community have added a Secondary branch to their School for Boys in Khartoum.

There are five schools for boys of a standard corresponding to the Government Intermediate Schools, of which two belong to the Coptic Community and are situated at Khartoum and Atbara, and two to the American Mission at Khartoum and Omdurman.

The fifth is the Native School at Omdurman, which was opened in 1924 under the direction of a Committee of leading notables.

Elementary classes form part of the Coptic Schools at Khartoum and Atbara.

The Unity High School for Girls was opened in 1928 and provides secondary education for the girls of the Greek, Armenian, Syrian and Coptic Communities in Khartoum.

For the most part the Missionary Societies have concentrated their efforts on schools corresponding to the Intermediate type which supply a definite need as the Government has so far confined its attention to Elementary

* Legislation dealing with non-Government schools is contained in the Education (Non-Government) Schools Ordinance, 1927, and Regulations made thereunder.

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Schools. The majority of girls who attend these schools are not of Sudanese nationality but come from the non-native element of the population of the larger towns.

There are five of these schools, i.e., the Church Missionary Society (3)—Omdurman, Wad Medani and Atbara; American Mission (1)—Khartoum North; and the Coptic Community (1)—Khartoum.

The Church Missionary Society have seven Elementary Schools and the Coptic Community one.

The Hellenic Community have four mixed schools at Khartoum, Wad Medani, Port Sudan and El Obeid. The school at Khartoum is a large one containing over 250 pupils of Greek nationality and has Elementary, Intermediate and Secondary classes. It is housed in excellent buildings close to the Greek Church and has a well-qualified staff of teachers.

The Roman Catholic Mission have small schools at Khartoum, Atbara and Port Sudan, attended almost entirely by children from the non-native communities. The teaching is in the hands of the Sisters.

There are Diocesan schools for British children at Khartoum, Atbara and Port Sudan.

THE SOUTHERN SPHERE

In the remote regions of the Southern Sudan, education was, until 1926, wholly in the hands of the several Missionary bodies operating in that sphere. In 1922 the Government provided some monetary assistance, and in 1927 instituted a regular system of subsidies to approved mission schools, and thereby became directly concerned with the type and standard of education given in these schools. A resident Inspector of Education was appointed for the Southern sphere in 1926.

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The subsidies are given subject to the following general conditions :—

(a) That a European exercise uninterrupted supervision over the School, and be withdrawn from the station only in case of sickness and home leave.

(b) That the syllabus as laid down be adhered to.

(c) That the Resident Inspector is satisfied with the progress and efficiency of the school.

(d) That if any of the conditions are unfulfilled the Resident Inspector may reduce or withdraw the grant for the following year.

The amount given in subsidies has steadily increased since 1927 as new schools have been opened.

Since the inception of the system of regular grants-in-aid, the standard of education given has improved and a considerable measure of uniformity has been attained.

The aim of the Education Department in the Southern provinces is, in the words of Lord Lugard, "to fit the ordinary individual to fill a useful part in his environment, with happiness to himself." The tribes of the South are pagan and very primitive ; but it is recognised that education, varying from tribe to tribe with the degree of development reached, is essential to every African social unit if it is to sustain the impact of advancing civilisation.

The Government has steadily pursued a policy of Native Administration : the accepted tribal authorities are recognised by Government, and native law and custom, in so far as they are not repugnant to morality and order are supported. It follows that education must primarily be directed to making the individual a good tribesman or villager. Education which attracts the average individual away from his social unit is discouraged. Nevertheless it is to the schools that these provinces must look for Government servants and teachers. The Intermediate

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schools are beginning to supply trained boys for this purpose. For the time being it is obvious that the numbers so trained must be limited by the opportunities for their absorption in Government service, teaching or other professions.

There are four missions working in the Southern Sudan :

The Church Missionary Society

(Gordon Memorial Sudan Mission).

Roman Catholic Mission.

American Mission.

Sudan United Mission.

The educational system consists of three Intermediate, thirty-three Elementary, three Trades, two Normal, and eleven Girls' schools.

The *Intermediate* Schools are as follows :

(a) At Loka on the Rejaf-Aba road in Mongalla Province is the Church Missionary Society's Intermediate School.

(b) At Okaru on Mount Lueh is the Roman Catholic Mission Intermediate School for Mongalla Province.

(c) At Bussere (near Wau) is the Roman Catholic Mission Intermediate School for the Bahr el Ghazal Province.

There are about 300 boys in all in these three schools. The course is for six years and English is the language of instruction for all subjects except Religion, and the hours devoted in the time sheet to Composition in the pupils' own vernacular.

There are thirty-three *Elementary Schools* with a total attendance of some 2,613 boys. Each school is in charge of a European Missionary. Of these schools ten are in Mongalla Province, twelve in the Bahr el Ghazal, seven in the Upper Nile and four in Kordofan (Nuba Mountains). The teaching of English as an additional subject in the

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third and fourth years is permitted because some knowledge of a common tongue is extremely useful for boys entering the Intermediate schools which draw pupils from widely different language areas.

Bush Schools or Out-schools

In certain areas there are a large number of such schools attached to mission stations. They vary in quality and attendance to a great extent. In some, the actual education given amounts to very little, while others have well-trained native teachers capable of preparing pupils for the second year of the Elementary Course. Besides instruction in religion and the "three R's" which is universal, drill and games are frequently included in the curriculum.

In many cases these schools have been started at the request of the local chief and the grass school houses have been erected by the local inhabitants. Not infrequently they are attended by adults as well as children.

The number of Out-schools in 1932 was 263 and the attendance about 7,500.

Technical Education

There are three Trades Schools situated as follows: Loka (Church Missionary Society), Wau and Torit (Roman Catholic Mission). The attendance in 1932 was 128. At most mission stations one or two boys learn elementary carpentry, bricklaying, tailoring, etc.

Girls' Education

There are eleven subsidised Girls' schools and in some cases girls attend the Boys' Elementary schools. In 1932 the number of girls attending school was 547.

Training of Teachers

Normal schools have been opened by the Roman Catholic Mission since 1930 at Torit and Mopoi and a further Normal school in the Dinka area is contemplated.

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III. GENERAL

The Government schools from the Elementary stage right up to the Gordon College, have hitherto been looked on by most of the people as a selective agency for the production of Government officials. In a new country this view was inevitable. The attraction of Government employment is obvious and education is the only door to such employment. Up till 1931 the supply of lads from the schools could not keep pace with the demand for Government officials. The supply is now well in excess of the demand, and the pupils of the Gordon Memorial College and Intermediate schools cannot all rely on Government employment.

No immediate expansion of Secondary or Intermediate schools is necessary or even desirable, and this form of education presents no problem. Post-secondary education leading up to a University standard is still remote. A number of young men have been sent to the American University of Beirut, where they have obtained the B.A. degree, to their own advantage and the advantage of the country. The professional qualifications of the senior education staff is relatively high and the work of the Sudanese doctors who have obtained their diploma at the Kitchener Memorial School of Medicine in Khartoum augurs well for the eventual introduction of higher standards of education.

The improvement of Elementary Education is at present and must be for some years the main concern of the Government.

It will be seen from the preceding pages that the *Khalwa* or Koranic school is the only school indigenous both in origin and atmosphere. It is a valuable institution as providing religious and moral training. Its value and success depends largely on its position outside the educa-

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tion system proper: to build a system of education for the whole Northern Sudan on the Koranic schools as a foundation would deprive them of their character and saddle the Government with the unwelcome task of remodelling somewhat inferior material. In the three Provinces of Halfa, Dongola and Berber there exist advanced *Khalwas* in which a low standard of literacy is reached and here and there a measure of proficiency is evident. Here the position is somewhat different and there appears to be real advantage in recognising the advanced *Khalwa* as a valuable adjunct of the education system, and of encouraging it in every way possible.

The Elementary Schools have a long and honourable history, but it is questionable whether development on their present lines is entirely suitable to the needs of a purely pastoral and agricultural country.

The present problem therefore is one of adapting the Elementary schools to the needs of the small town, the tribe and the village, a long and difficult process since conditions vary considerably from province to province. Experiment is necessary both in method and material and teachers brought up in the old way need re-training. The new Elementary Teachers' Training College is designed to meet this need. The training will be in the hands of selected experts: the college will be sited in a rural environment and be built on the native pattern and the teaching will be related as far as possible to the life of the people. Agriculture, animal husbandry, simple sanitation and welfare work will have a place in the curriculum. As experiment proceeds, suitable text-books for the schools will be prepared by the staff, and the Training College will be in constant touch with the education system throughout the Northern provinces.

SOME MEDICAL PROBLEMS OF THE SUDAN

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THE Sudan, by reason of its vast size and variety of climate and races, presents interesting medical problems.

Many of these are concerned with the protection of the country from possible sources of infection outside its borders. Bilharzia, Hookworm, Plague and Typhus in Egypt; Sleeping Sickness in the French and Belgian Congos and parts of Uganda, and Relapsing Fever from the West, require special measures to protect the Sudan from infection. In addition, the returning pilgrims from Mecca may carry Cholera, Plague or Smallpox from the east.

All Egyptian labourers entering the Sudan are detained in quarantine at Wadi Halfa. They are examined for Hookworm and Bilharzia and are treated, if necessary, before they are released. The usual precautions against Typhus are also taken. A quarantine at Suakin handles the returning pilgrim traffic, and all pilgrims are detained for at least five days.

The question of epidemics arising within the Sudan is effectively dealt with by a system of medical intelligence from the network of dispensaries throughout the country.

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DISEASES

Malaria

Occurs during, or immediately after, the rainy season in the Central Sudan and throughout the year in the southern districts. By the usual methods the sanitary service manage to keep the towns, except in the far south, comparatively free of this disease. But anyone who is living or touring in the country districts during the malarial season should consider himself in an infected area and take the necessary precautions.

Blackwater Fever

Is not uncommon, particularly in the southern districts.

Bilharzia

This disease is carried by certain species of snails and is fairly prevalent in the Dongola, Blue Nile and White Nile Provinces. It is a most debilitating disease and in its worst form may lead to cancer. There are certain smaller areas of infection caused by the water holes in the western provinces of the Sudan, and about 10% of the pilgrims from the west are found to be infected with Bilharzia on their arrival in the Gezira.

The snails concerned in this disease are usually found in the backwaters and grassy banks of rivers and canals. It is unsafe to bathe in, or drink unboiled or unfiltered water from suspected rivers. The incidence of this disease in certain endemic areas, notably Dongola, has decreased considerably in recent years owing to the intensive campaign undertaken against it.

The control of this disease is of great economic importance to the Sudan as there is always the risk that the irrigated area of the Gezira may become infected. This area is at present practically free from Bilharzia and it is of paramount importance that it should remain so.

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Leprosy

This disease is endemic in the southern districts of the Bahr El Ghazal and Mongalla Provinces. Occasional cases occur in most parts of the country. It is of interest to note that one particular tribe, the Zande of about 200,000 people, contain 6,000 cases of leprosy; approximately 75% of the total number of cases in the Sudan.

Large leper settlements are situated at Sources Yubo and Li Rangu in the Bahr El Ghazal Province, and at Yei, Kajo Kaji and Opari in the Mongalla Province. Infectious cases are isolated in these settlements; the remainder are treated, if possible, at dispensaries situated near their homes.

Sleeping Sickness

The Tsetse Fly, which is the carrier of this disease, occurs in the southern districts of the Bahr El Ghazal and Mongalla Provinces, and at one time or other most of the fly-infested areas have been infected with this disease. The infected fly lives in the undergrowth along river banks, and seldom flies more than 100 yards. Consequently if stretches are cleared for this distance on each side of watering places and similar clearings are made at bridge sites, infection is unlikely to occur, provided the natives use the official watering places.

The natives of this area prefer to dwell in the forest in isolated huts, and villages are not a feature of their social life. Consequently it has been found necessary to induce them to live along selected roads to facilitate frequent medical inspections of the whole population for cases of sleeping sickness, and the proper clearing and supervision of the watering places.

By means of a very thorough and arduous campaign sleeping sickness has been practically eliminated and only occurs along the Southern frontier of the Equatorial

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Province at the present time. However, as long as centres of infection remain near our southern frontiers the Sudan will be liable to fresh outbreaks of this disease, and all the special precautions will have to be maintained.

Other Diseases worthy of note

Epidemics of Meningitis, Smallpox, Diphtheria and Relapsing Fever occur from time to time.

Epidemic meningitis is caused by overcrowding, and badly-ventilated houses, and relapsing fever is spread by lice and ticks. Kala Azar, a fever of unknown cause, is found in the foothills along the Abyssinian border. Malta Fever, contracted by drinking infected goats' milk, is common in the Eastern Sudan, and enteric fever occurs from time to time. Venereal disease is prevalent, particularly in the Northern Sudan.

Tuberculosis

Tuberculosis occurs throughout the Sudan. In the northern districts where medical work is well developed, and where accurate observations can be made, it is considered that the disease is stationary. In the south, investigations are being carried out, and the situation carefully watched.

Snake Bite

An appreciable number of Sudanese die from this cause yearly. Venomous snakes are common in the Sudan, both the *Colubridæ* and *Viperidæ*. It is found that death is almost always caused by the small vipers, principally the saw-scaled viper (*Echis Carinatus*) and the black burrowing viper (*Atractaspis Microlipdota*).

MEDICAL WORK IN THE GEZIRA

Special attention has been given to this district in recent years owing to its economic importance and rapid development.

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When a large virgin area in a part of the country, where malaria is endemic, becomes intensely cultivated and irrigated, many sanitary problems are encountered; of these the most important are the protection of the cultivators against malaria, which is already endemic, and the protection of the canals from infection by Bilharzia from outside. It will be realised that canalisation and systematic watering of land, gives rise to endless possible breeding places of *Anopheles* mosquitoes. The problem has been tackled from two aspects. A large staff of British sanitary Inspectors and subordinate sanitary staff supervise a very thorough system of anti-malarial measures.

The large Hospitals at Wad Medani, Sennar and Abu Ushar, and a network of forty dispensaries scattered over the Gezira, give immediate facilities for hospital or dispensary treatment of malaria, thus reducing the number of human carriers of the disease. To date these measures have been completely successful, and there is at present less malaria in the irrigated area than there was before the scheme commenced.

Bilharzia presents a different problem. It is not endemic in the part of the Gezira at present irrigated, although it occurs in the villages near the White Nile. Similar irrigation schemes in other countries are heavily infected with the disease and it was obvious that it would be difficult to keep the area clear of this disease.

The following precautionary measures are at present carried out :—

- (1) The indigenous population are examined once a year for Bilharzia, and any cases found are treated.
- (2) Immigrants from West Africa, who form an important part of the labourers employed in cotton-picking, are examined at Dueim and

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Kosti on the White Nile before they enter the Gezira, and those found infected are detained until they are cured. As 10% of Westerners carry Bilharzia this is a measure of great value and importance.

- (3) All canals in which infected snails have been found, or near which any of the indigenous population have been found to be infected, are treated with disinfectant. This kills the snails, and it is found that after two disinfections, at short intervals, the canals are clear of snails for about six months.

In addition, the anti-Bilharzia campaign carried out in Dongola and the Wadi Halfa Quarantine play their part, as labour is drawn from both these sources for the Gezira.

The result has been that Bilharzia has been kept out of the Gezira to date.

MEDICAL ORGANISATION

Khartoum

In Khartoum is situated the administrative headquarters of the Sudan Medical Service, and the surgical, medical, obstetrical, ophthalmic and sanitary specialists.

Provinces

A British Doctor is in charge of each Province, having at Province headquarters, or elsewhere, a well-equipped hospital staffed by Syrian or Sudanese Medical Officers.

In many provinces there are other hospitals in charge of either British, Syrian or Sudanese doctors according to their size and importance. A network of dispensaries is distributed throughout the provinces. These are in charge of Sudanese dispensary hakims and feed the central hospitals with cases requiring hospital treatment, and relieve them of cases which can be treated locally. Malaria, Gonorrhoea, Syphilis, Bilharzia, and all minor

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ailments and injuries are among the principal diseases treated.

A variable number of tribal dressers are based on, and work under, the dispensaries. These men are selected by their Sheikhs or Chiefs, who regulate their movements. They have to report to the dispensaries at fixed intervals, and receive yearly refresher courses. Only the simplest first aid and minor ailment treatment is carried out by them. But they have been found of definite value as they often give early information of epidemics in remote areas, such as the innermost fastnesses of the Nuba Mountains.

In the Northern Sudan one or more sanitary barbers are usually attached to each district. Their primary duties are registration of births and deaths and vaccination. In recent years they have been trained to carry out simple treatment, and perform more or less the same functions among the northern riverain areas, as the tribal dressers carry out among the nomads. In addition, there is a sanitary organisation consisting of a number of British or Sudanese sanitary inspectors, varying according to the importance of the sanitary problems in the district.

It will be realised that early information regarding epidemics is easily obtained through this organisation, and it is of interest to note that whereas the outbreak of relapsing fever in Darfur in 1926, before the dispensary system was established, cost 10,000 lives; the epidemic in the same province in 1931 was immediately reported and dealt with, with a loss of under forty lives.

Certain parts of the country require special arrangements. Quarantine staffs are stationed at Port Sudan, Suakin, and Wadi Halfa. The Sleeping Sickness and Leprosy campaign in the Southern Bahr El Ghazal has several points of interest. A large settlement has been

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established at Sources Yubo which contains about 700 Sleeping Sickness cases and their families, and about 600 lepers ; it extends over an area of forty square miles. A similar, but smaller, settlement has been established at Li Rangu near Yambio. A considerable amount of time and effort is required to deal with the administrative and medical problems met with in supervising settlements of this size.

In the Upper Nile Province a medical inspection ship is provided. A British doctor is stationed on board and it patrols the river treating the natives, and carrying any who require hospital treatment to Malakal.

MEDICAL EDUCATION

Medical Officers

The Kitchener School of Medicine provides a complete medical training on British lines. The School is in charge of a British doctor as registrar and the various specialists stationed in Khartoum teach their particular subjects. The course is of four years' duration, in addition to one year's pre-medical training at the Gordon College, and one year after qualification as a House Surgeon at one of the larger Hospitals.

The first seven doctors qualified in 1928. The standard reached compares very favourably with the other medical schools in the Middle East.

Sanitary Officers

A scheme has just been inaugurated to train Sudanese Sanitary officers. These spend a year at the Kitchener Medical School, a year under the Public Health authorities, and a year on probation in a big sanitary centre such as Wad Medani or Port Sudan.

Dispensary and Sanitary Hakims

The Dispensary and Sanitary Hakims are chosen from

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the best hospital orderlies. Special courses of instruction are arranged for them at the larger hospitals and after a year's training they undergo a written and practical examination, and those who pass are posted to dispensaries as Sanitary Hakims. A further course of instruction and an examination is required before promotion to Dispensary Hakim. The training is, of course, empirical, and in Arabic. Laboratory Assistants are trained for the Sudan Medical Service at the Wellcome Laboratory of Tropical Research, and assistant dispensers are trained in Khartoum.

Women

Among the most difficult problems to be faced in the Sudan, is the supply of trained native nurses and midwives.

The Sudanese definitely consider these professions as degrading, and it will take many years of education and propaganda to overcome this prejudice. Consequently it is difficult to get the right type of woman to train, but despite these difficulties very great progress has been made during the last ten years.

Midwives

The School of Midwifery is situated at Omdurman, in charge of a British Inspectress of midwives and an assistant. These officials tour the country for three months in the year selecting suitable candidates for training, whom they bring back to Omdurman. The class of about twenty pupils undergoes a very intensive course of six months' training in the elements of midwifery and antiseptics. At the end of this time an examination is held and those who pass return to work among their own people. By this means the standard of midwifery is slowly improving throughout the Sudan, and Omdurman is now entirely served by trained certified midwives.

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In addition to the midwives a number of selected women undergo a two years' course of training in Omdurman Civil Hospital under the immediate supervision of a British Charge Sister. Those who are successful in their final examination are posted to Hospitals in the Provinces, where they have been found to be most useful in raising and maintaining the standard of native nursing.

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